# DAV-FR1/FR8/FR9

# SERVICE MANUAL

**Ver 1.0 2004.06**

*US Model*
*DAV-FR1/FR8/FR9*
*Canadian Model*
*DAV-FR1*

- DAV-FR1/FR8/FR9 are composed of following models. As service manuals are issued for each component model, please refer to them.

## COMPONENT MODEL NAME

| | DAV-FR1 | DAV-FR8 | DAV-FR9 |
|---|---|---|---|
| SACD/DVD RECEIVER | HCD-FR1 | HCD-FR8 | HCD-FR9 |
| FRONT SPEAKER | SS-TS20 | SS-TS21 | SS-TS21 |
| CENTER SPEAKER | SS-CT44 | SS-CT33 | SS-CT33 |
| SURROUND SPEAKER | SS-TS20 | SS-TS20 | SS-TS21 |
| SUB WOOFER | | SS-WS12 | |

## PARTS LIST

| Part No. | Description |
|---|---|
| | ACCESSORIES |
| | ********** |
| 1-478-698-11 | COMMANDER, STANDARD (RM-SP350) |
| 1-754-059-12 | ANTENNA, LOOP (AM) |
| 1-754-147-41 | ANTENNA (FM) |
| 1-769-108-11 | CORD, CONNECTION (VIDEO CORD) |
| 1-827-244-11 | CORD (WITH CONNECTOR) |
| 4-255-434-13 | MANUAL, INSTRUCTION (ENGLISH) |
| 4-255-434-23 | MANUAL, INSTRUCTION (FRENCH)(CND) |

- Abbreviation
  CND : Canadian model.

## DVD HOME THEATRE SYSTEM

**9-879-007-01**
2004F16-1
© 2004.06
**Sony Corporation**
**Home Audio Company**
**Published by Sony Engineering Corporation**

SONY®

# REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

| Ver. | Date | Description of Revision |
|---|---|---|
| 1.0 | 2004.06 | New |
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# HCD-FR1/FR8/FR9

# SERVICE MANUAL

**Ver. 1.7 2005.07**

*US Model*
*HCD-FR1/FR8/FR9*

*Canadian Model*
*HCD-FR1*

PHOTO: HCD-FR1

HCD-FR1/FR8/FR9 are the amplifier, DVD/ SACD and tuner section in DAV-FR1/FR8/FR9.

| | |
|---|---|
| Model Name Using Similar Mechanism | NEW |
| Mechanism Type | CDM69-DVBU16 |
| Optical Pick-up Name | DBU-1 |

## SPECIFICATIONS

**AUDIO POWER SPECIFICATIONS POWER OUTPUT AND TOTAL HARMONIC DISTORTION:**

With 4 ohm loads, both channels driven, from 20 – 20,000 Hz; rated 75 watts per channel minimum RMS power, with no more than 0.7 % total harmonic distortion. (from 250 milli watts to rated output)

### Amplifier section (HCD-FR1)

| | |
|---|---|
| Surround mode (reference) music power output | Front: 110 W + 110 W (with SS-TS20)<br>Center*: 110 W (with SS-CT44)<br>Surround*: 110 W + 110W (with SS-TS20)<br>Subwoofer*: 100 W × 2 (with SS-WS12) |

### Amplifier section (HCD-FR8)

| | |
|---|---|
| Surround mode (reference) music power output | Front: 114 W + 114 W (with SS-TS21)<br>Center*: 114 W (with SS-CT33)<br>Surround*: 114 W + 114W (with SS-TS20)<br>Subwoofer*: 115 W × 2 (with SS-WS12) |

### Amplifier section (HCD-FR9)

| | |
|---|---|
| Surround mode (reference) music power output | Front: 114 W + 114 W (with SS-TS21)<br>Center*: 114 W (with SS-CT33)<br>Surround*: 114 W + 114W (with SS-TS21)<br>Subwoofer*: 115 W × 2 (with SS-WS12) |

* *Depending on the sound field settings and the source, there may be no sound output.*

| | |
|---|---|
| Inputs | VIDEO/SAT:<br>Sensitivity: 250 mV/ 450 mV<br>Impedance: 50 kilohms |
| Output | SURROUND BACK<br>Voltage: 2V<br>Impedance: 1 kilohms |
| Phones | Accepts low-and high-impedance headphones. |

### Super Audio CD/DVD system

| | |
|---|---|
| Laser | Semiconductor laser<br>(Super Audio CD/DVD: λ = 650 nm)<br>(CD: λ = 780 nm)<br>Emission duration: continuous |
| Signal format system | NTSC |
| Frequency response (at 2 CH STEREO mode) | DVD (PCM): 2 Hz to 22 kHz (±1.0 dB)<br>CD: 2 Hz to 20 kHz (±1.0 dB) |
| Harmonic distortion | Less than 0.03 % |

### Tuner section

| | |
|---|---|
| System | PLL quartz-locked digital synthesizer system |
| FM tuner section | |
| Tuning range | 87.5 – 108.0 MHz (100 kHz step) |
| Antenna (aerial) | FM wire antenna (aerial) |
| Antenna (aerial) terminals | 75 ohms, unbalanced |
| Intermediate frequency | 10.7 MHz |
| AM tuner section | |
| Tuning range | 531 – 1,710 kHz (with the interval set at 9 kHz)<br>530 – 1,710 kHz (with the interval set at 10 kHz) |
| Antenna (aerial) | AM loop antenna (aerial) |
| Intermediate frequency | 450 kHz |

### Video section

| | |
|---|---|
| Outputs | Video: 1 Vp-p 75 ohms\<br>S VIDEO:<br>Y: 1 Vp-p 75 ohms<br>C: 0.286 Vp-p 75 ohms<br>COMPONENT:<br>Y: 1 Vp-p 75 ohms<br>$P_B/C_B$, $P_R/C_R$: 0.65 Vp-p 75 ohms |

### General

| | |
|---|---|
| Power requirements | 120 V AC, 60 Hz |
| Power consumption | 120 W |
| Dimensions (approx.) | 430 × 70 × 398 mm (17 × 2 7/8 × 15 3/4 inches) (w/h/d) incl. projecting parts |
| Mass (approx.) | 5.5 kg (12 lb 12 oz) |

Design and specifications are subject to change without notice.

## SACD/DVD RECEIVER

**9-879-011-08**
2005G16-1
© 2005.07

**Sony Corporation**
**Audio Group**
**Published by Sony Engineering Corporation**

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Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

**CAUTION**
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

### UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

### : LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 °C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscou-s (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

### SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

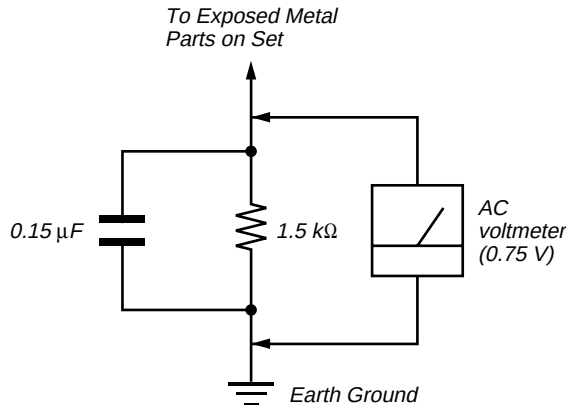



***Fig. A. Using an AC voltmeter to check AC leakage.***

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!**

**LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COM- POSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.**

## TABLE OF CONTENTS


**1. SERVICING NOTE** ..... 4

**2. GENERAL** ..... 5

**3. DIAGRAMS**

3-1. Printed Wiring Board – RF Board – ..... 9
3-2. Schematic Diagram – RF Board – ..... 10
3-3. Printed Wiring Board – RELAY Section – ..... 11
3-4. Schematic Diagram – RELAY Section – ..... 12
3-5. Printed Wiring Board – DMB08 Board (Side A) – ..... 13
3-6. Printed Wiring Board – DMB08 Board (Side B) – ..... 14
3-7. Schematic Diagram – DMB08 Board (1/10) – ..... 15
3-8. Schematic Diagram – DMB08 Board (2/10) – ..... 16
3-9. Schematic Diagram – DMB08 Board (3/10) – ..... 17
3-10. Schematic Diagram – DMB08 Board (4/10) – ..... 18
3-11. Schematic Diagram – DMB08 Board (5/10) – ..... 19
3-12. Schematic Diagram – DMB08 Board (6/10) – ..... 20
3-13. Schematic Diagram – DMB08 Board (7/10) – ..... 21
3-14. Schematic Diagram – DMB08 Board (8/10) – ..... 22
3-15. Schematic Diagram – DMB08 Board (9/10) – ..... 23
3-16. Schematic Diagram – DMB08 Board (10/10) – ..... 24
3-17. Printed Wiring Board – AMP Board (Side A) – ..... 25
3-18. Printed Wiring Board – AMP Board (Side B) – ..... 26
3-19. Schematic Diagram – AMP Board (1/4) – ..... 27
3-20. Schematic Diagram – AMP Board (2/4) – ..... 28
3-21. Schematic Diagram – AMP Board (3/4) – ..... 29
3-22. Schematic Diagram – AMP Board (4/4) – ..... 30
3-23. Printed Wiring Board – IO Board – ..... 31
3-24. Schematic Diagram – IO Board (1/2) – ..... 32
3-25. Schematic Diagram – IO Board (2/2) – ..... 33
3-26. Printed Wiring Board – DDCON Board – ..... 34
3-27. Schematic Diagram – DDCON Board – ..... 35
3-28. Printed Wiring Board – FL Board – ..... 36
3-29. Schematic Diagram – FL Board – ..... 37
3-30. Printed Wiring Board – SPK Board – ..... 38
3-31. Schematic Diagram – SPK Board – ..... 38
3-32. Printed Wiring Board – POWER/FRONT PANEL Section – ..... 39
3-33. Schematic Diagram – POWER/FRONT PANEL Section – ..... 40

**4. EXPLODED VIEWS**

4-1. Case Section ..... 41
4-2. Front Panel Section ..... 42
4-3. Chassis Section ..... 43
4-4. Mechanism Deck Section-1 (CDM69-DVBU16) ..... 44
4-5. Mechanism Deck Section-2 (CDM69-DVBU16) ..... 45
4-6. Mechanism Deck Section-3 (CDM69-DVBU16) ..... 46
4-7. Mechanism Deck Section-4 (CDM69-DVBU16) ..... 47
4-8. Mechanism Deck Section-5 (CDM69-DVBU16) ..... 48
4-9. Mechanism Deck Section-6 (CDM69-DVBU16) ..... 49
4-10. Optical Pick-up Section (DBU-1) ..... 50

**5. ELECTRICAL PARTS LIST** ..... 51

# SECTION 1
# SERVICING NOTE

**NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT**

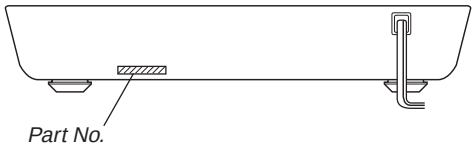
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

**NOTES ON LASER DIODE EMISSION CHECK**

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

**MODEL IDENTIFICATION**

*– BACK PANEL –*

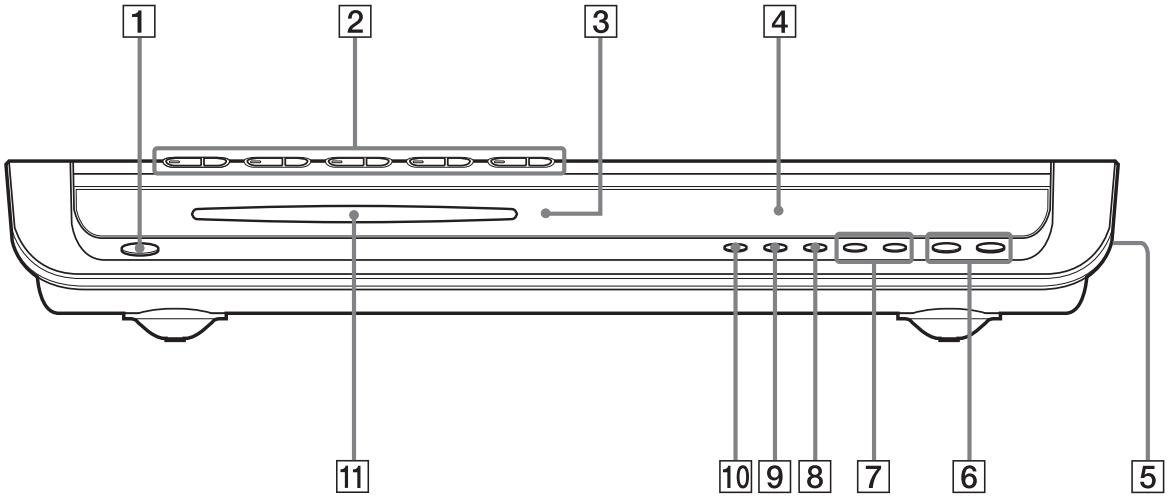



| MODEL | Part No. |
|---|---|
| FR1 | 4-253-916-0□ |
| FR8 | 4-253-916-1□ |
| FR9 | 4-253-916-2□ |

SECTION 2
GENERAL

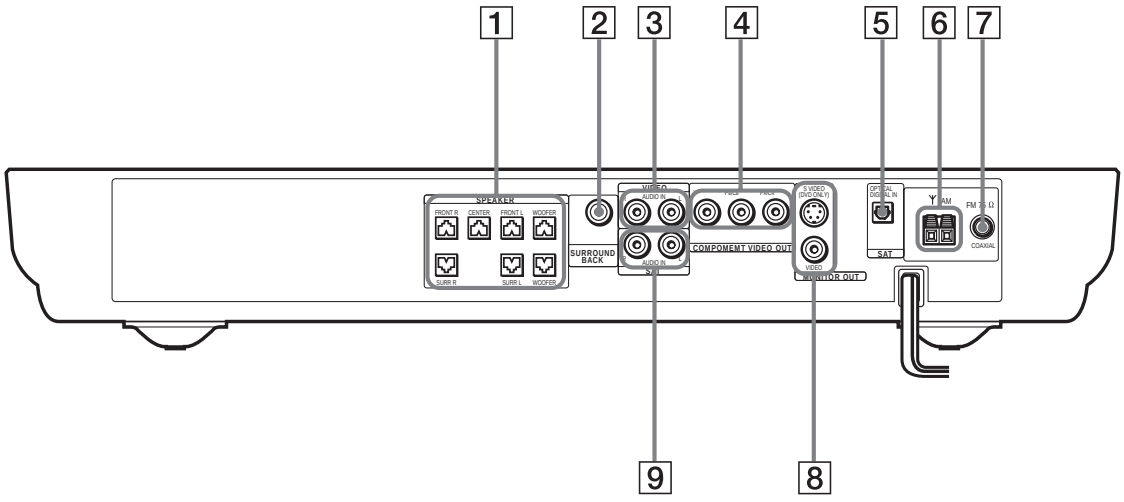
This section is extracted from instruction manual.

## Front Panel



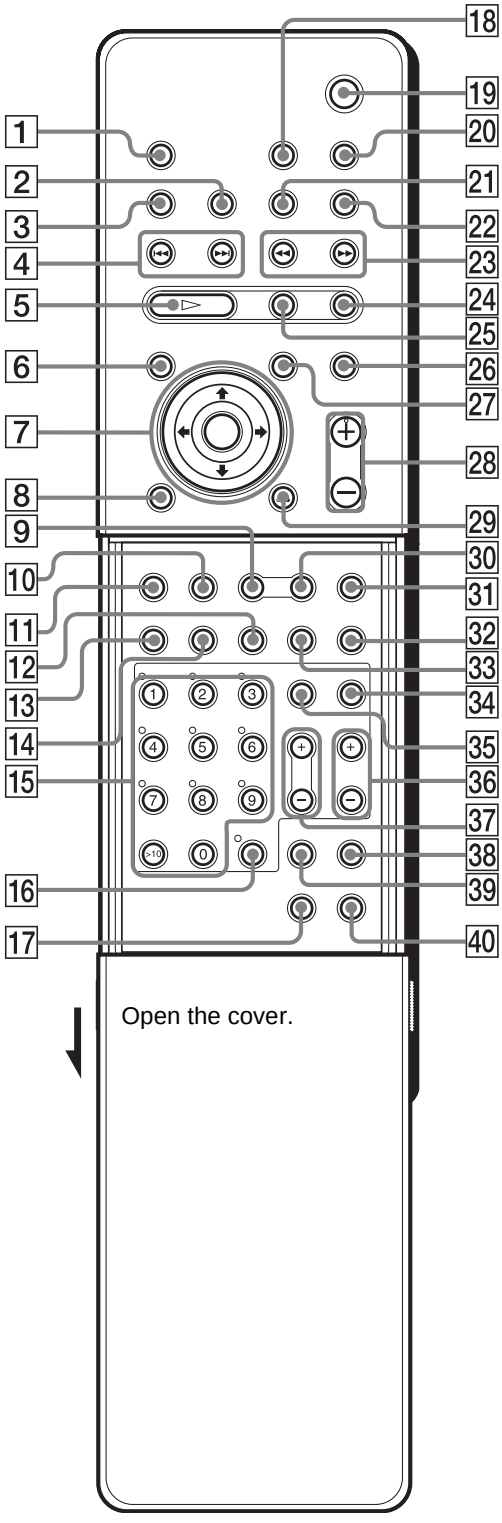

1 **I/⏻ (power) switch/STANDBY indicator (30)**
2 **DISC1-5 ⏏ (eject)/indicators (30)**
3 **(remote sensor) (13)**
4 **Front panel display (98)**
5 **PHONES (on the side of the system) jack (30)**
6 **VOLUME +/– (30, 83)**
7 **I◄◄ /►►I (31, 33)**
8 **■ (stop) (31)**
9 **▷II (play/pause) (30)**
10 **FUNCTION (30, 70, 73)**
11 **Disc slot (30)**

## Rear Panel




1 **SPEAKER jacks (15)**
2 **SURROUND BACK jack (19)**
3 **VIDEO AUDIO IN (L/R) jacks (23)**
4 **COMPONENT VIDEO OUT jacks (23)**
5 **SAT OPTICAL DIGITAL IN jack (24)**
6 **AM terminals (21)**
7 **FM 75 ΩCOAXIAL jack (21)**
8 **MONITOR OUT (VIDEO/S VIDEO) jacks (23)**
9 **SAT AUDIO IN (L/R) jacks (23)**

## Remote



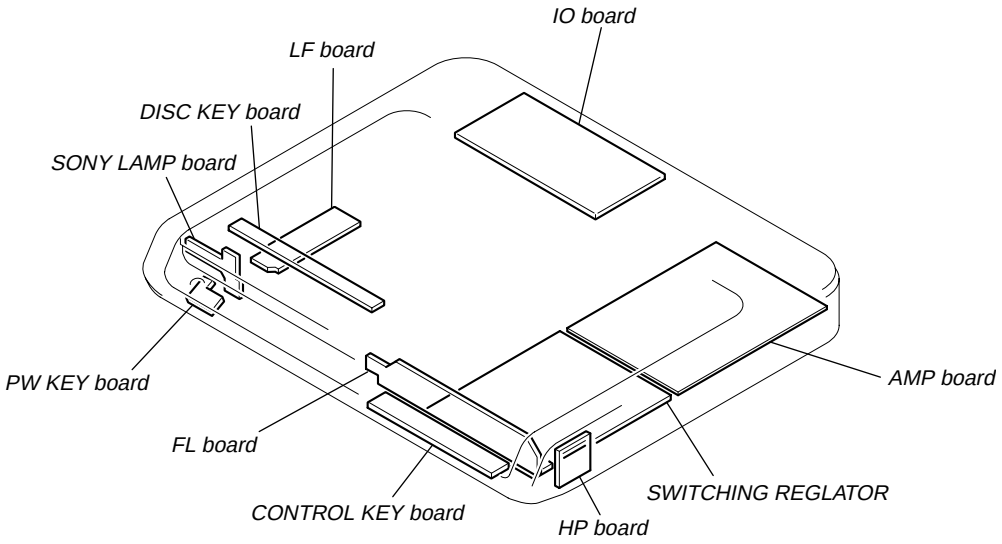

Note

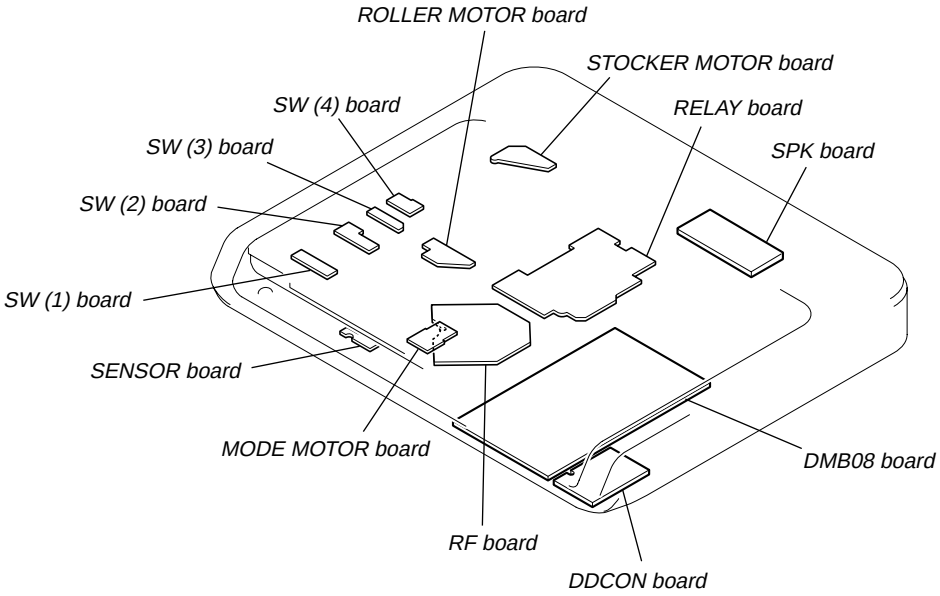
This remote control glows in the dark. However, before glowing, the remote must be exposed to light for awhile.

1 **DISC SKIP (30, 31)**
2 **DISPLAY (46, 49, 73)**
3 **SLEEP (75)**
4 **I◄◄ /►►I, PRESET –/+ (31, 33, 73, 74)**
5 **▷ (play) (30, 31, 32, 33, 37, 38, 39, 41, 41, 42, 43)**
6 **DVD TOP MENU/ALBUM– (33, 35, 36)**
7 **←/↑/↓/→/ENTER (27, 33, 33, 35, 36, 38, 38, 39, 41, 42, 44, 51, 57, 60, 61, 62, 64, 71, 72, 74, 75, 77, 85)**
8 **DVD DISPLAY (35, 36, 38, 41, 42, 44, 49, 50, 51, 60, 61, 62)**
9 **AUTO FORMAT DIRECT (53, 54)**
10 **DSGX (59)**
11 **DVD SETUP (27, 64, 77)**
12 **SUBTITLE (61)**
13 **AUDIO (51)**
14 **ANGLE (60)**
15 **Number buttons (33, 33, 39, 44, 60, 62, 64, 67, 69)**
16 **ENTER**
17 **TUNER MENU (72, 74)**
18 **TV I/⏻ (on/standby) (67)**
19 **I/⏻ (standby) (27, 30, 72, 73)**
20 **SONY TV DIRECT (69)**
21 **TUNER/BAND (72, 73, 74)**
22 **FUNCTION (27, 30, 70, 73, 74)**
23 **◄◄/►►/◄▮/▮► SLOW, TUNING –/+ (37, 43, 72, 73)**
24 **■ (stop) (31, 32, 33, 62, 73)**
25 **▮▮ (pause) (31)**
26 **MUTING (31)**
27 **DVD MENU/ALBUM+ (33, 35, 36)**
28 **VOL +/– (31, 73)**
29 **↶ RETURN (27, 33, 35, 36, 38, 39, 44, 62, 64, 77)**
30 **MODE (54, 55)**
31 **NIGHT MODE (59)**
32 **PLAY MODE (38, 39, 41)**
33 **REPEAT (39, 42)**
34 **TV (67, 69)**
35 **TV/VIDEO (67, 69)**
36 **TV CH +/– (67, 69)**
37 **TV VOL +/– (67)**
38 **AMP MENU (57, 71, 75, 85)**
39 **CLEAR (27, 39, 44)**
40 **FM MODE (73)**

# SECTION 3
# DIAGRAMS

**• Circuit Boards Location**



## THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS. (In addition to this, the necessary note is printed in each block.)

**For schematic diagrams.**
**Note:**

- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

| **Note:** | **Note:** |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié. |

- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages and waveforms are dc with respect to ground in service mode.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
  no mark : DVD STOP
- ( ) : CD STOP
- Circled numbers refer to waveforms.
- Signal path.
  - : AUDIO
  - : CD PLAY
  - : DVD PLAY
  - : TUNER
  - : VIDEO
  - : OPTICAL DIGITAL IN
  - : VIDEO IN
  - : CHROMA
  - : Y
  - : COMPONENT VIDEO
  - : AUX IN
  - : SACD PLAY
  - : R, G, B

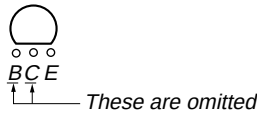
**For printed wiring boards.**
**Note:**

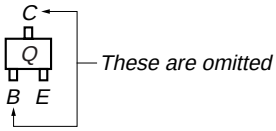
- ○——— : parts extracted from the component side.
- ○ : Through hole.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

| Caution: | |
|---|---|
| Pattern face side: (Side A) | Parts on the pattern face side seen from the pattern face are indicated. |
| Parts face side: (Side B) | Parts on the parts face side seen from the parts face are indicated. |

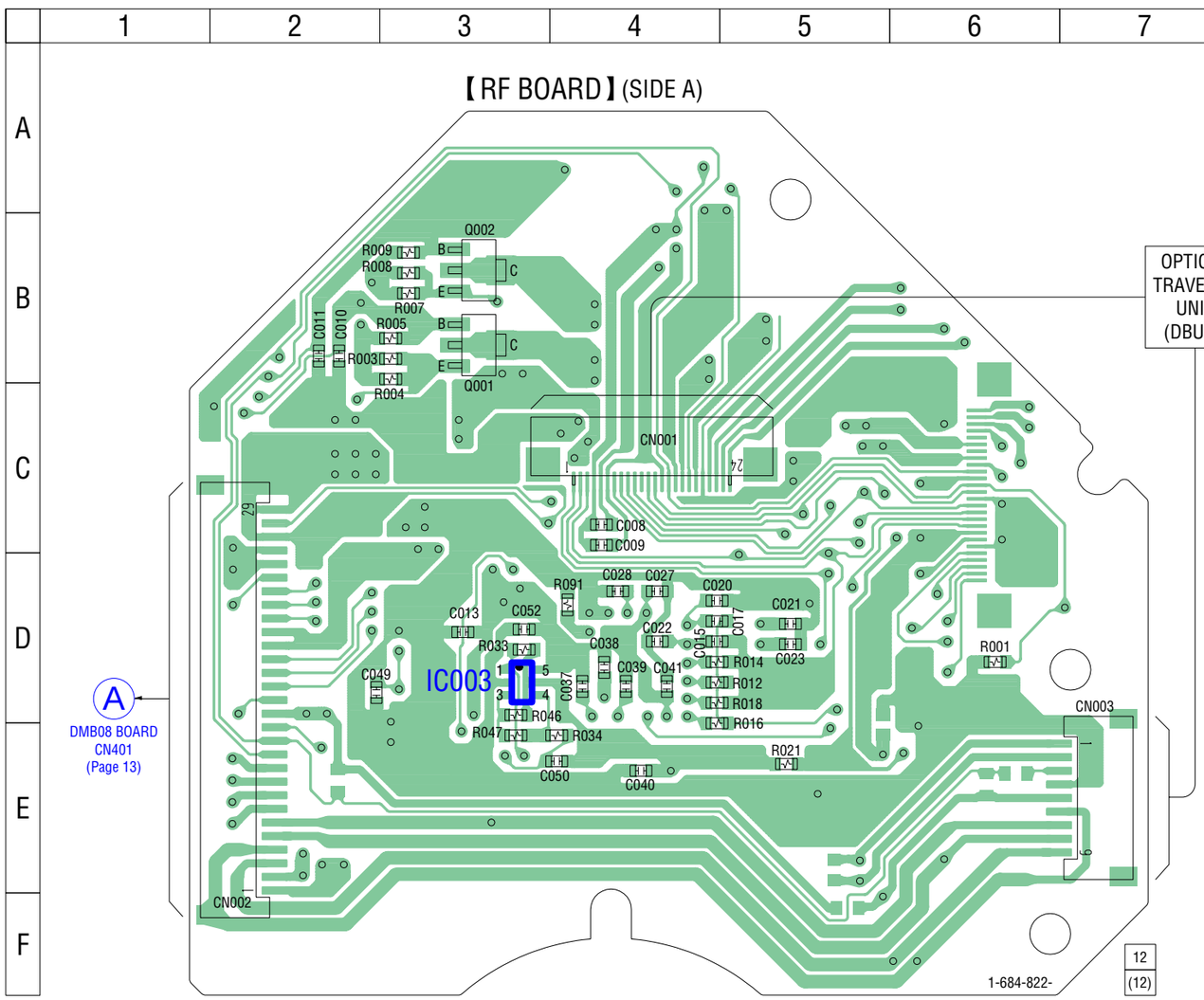
- Indication of transistor.

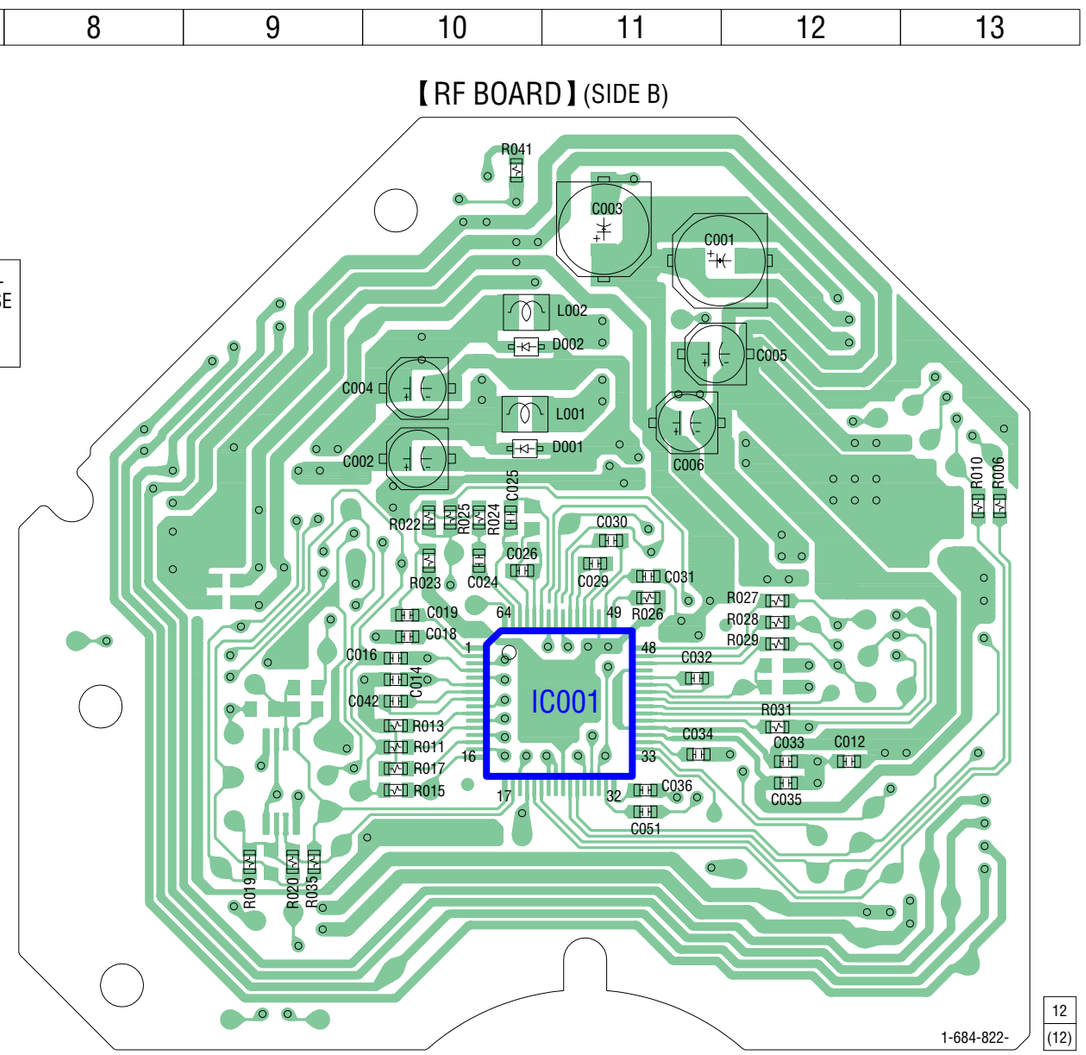


## 3-1. PRINTED WIRING BOARD — RF BOARD —

• See page 7 for Circuit Boards Location. :Uses unleaded solder.

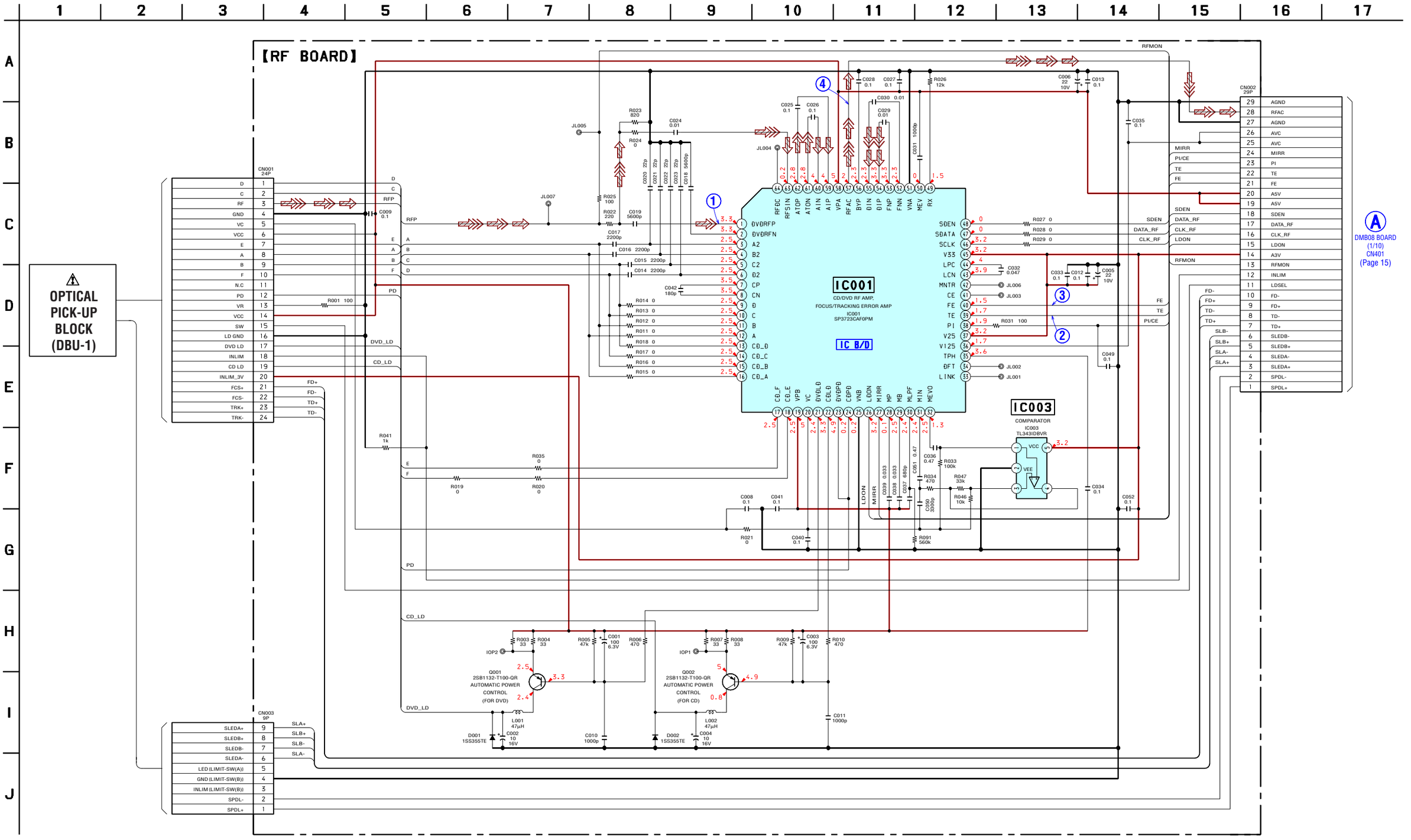



- **Semiconductor Location**

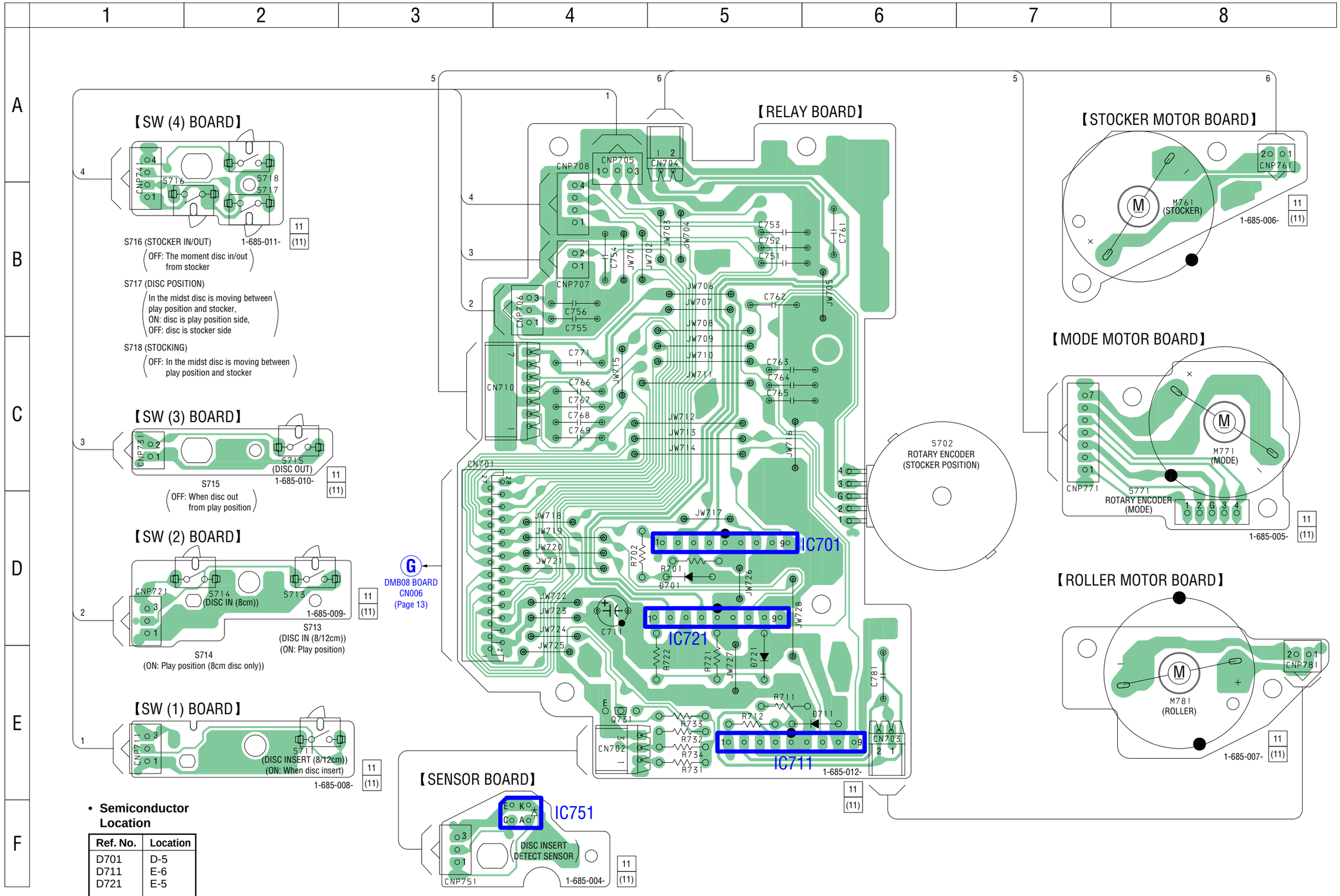
| Ref. No. | Location |
|---|---|
| D001 | C-10 |
| D002 | B-10 |
| IC001 | D-11 |
| IC003 | D-3 |
| Q001 | B-3 |
| Q002 | B-3 |

## 3-2. SCHEMATIC DIAGRAM — RF BOARD —



## 3-3. PRINTED WIRING BOARD — RELAY SECTION —

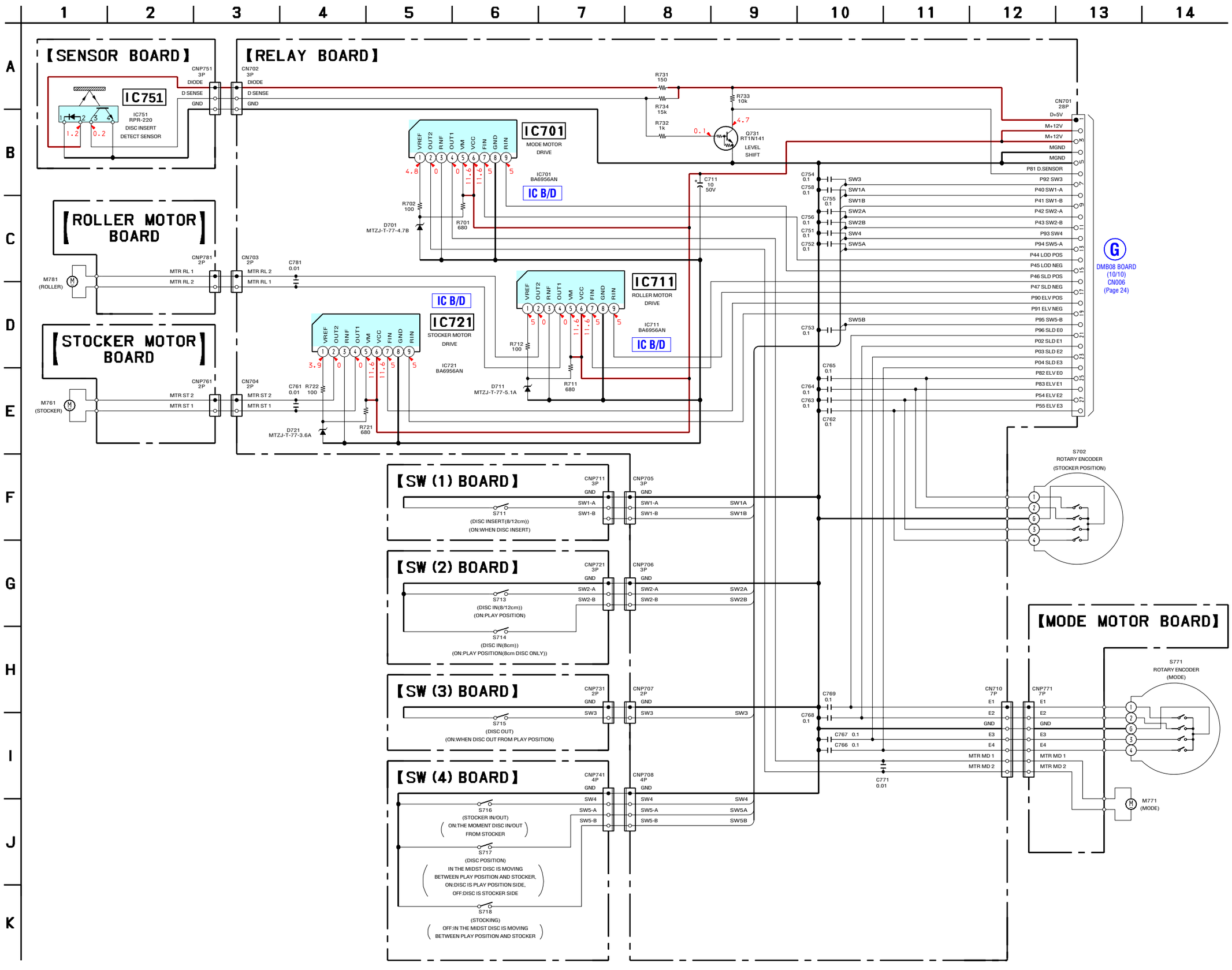
• See page 7 for Circuit Boards Location. :Uses unleaded solder.




• **Semiconductor Location**

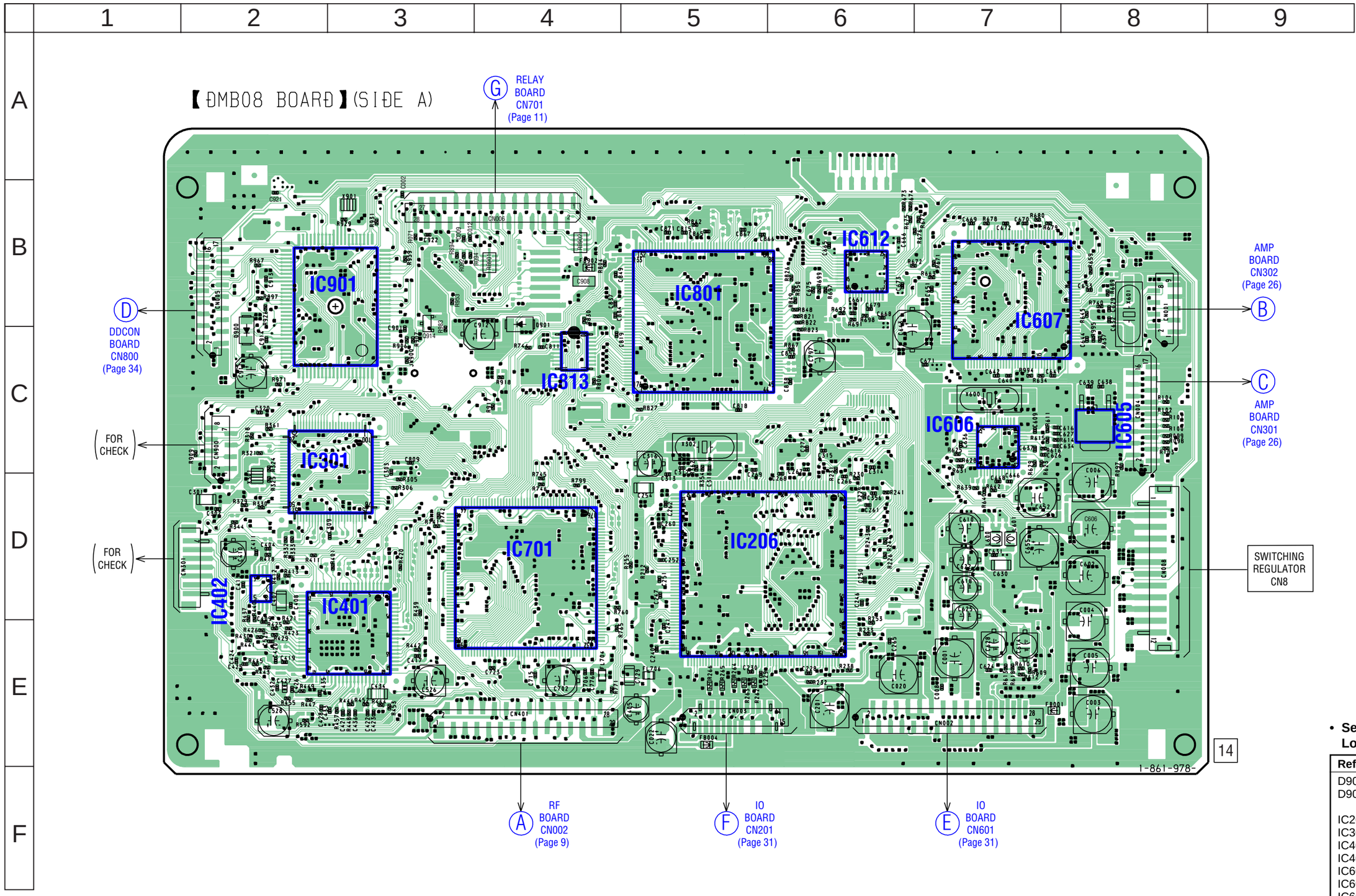
| Ref. No. | Location |
|---|---|
| D701 | D-5 |
| D711 | E-6 |
| D721 | E-5 |
| IC701 | D-5 |
| IC711 | E-5 |
| IC721 | D-5 |
| IC751 | F-4 |
| Q731 | E-4 |

## 3-4. SCHEMATIC DIAGRAM — RELAY SECTION —



## 3-5. PRINTED WIRING BOARD — DMB08 BOARD (SIDE A) —

• See page 7 for Circuit Boards Location. :Uses unleaded solder.

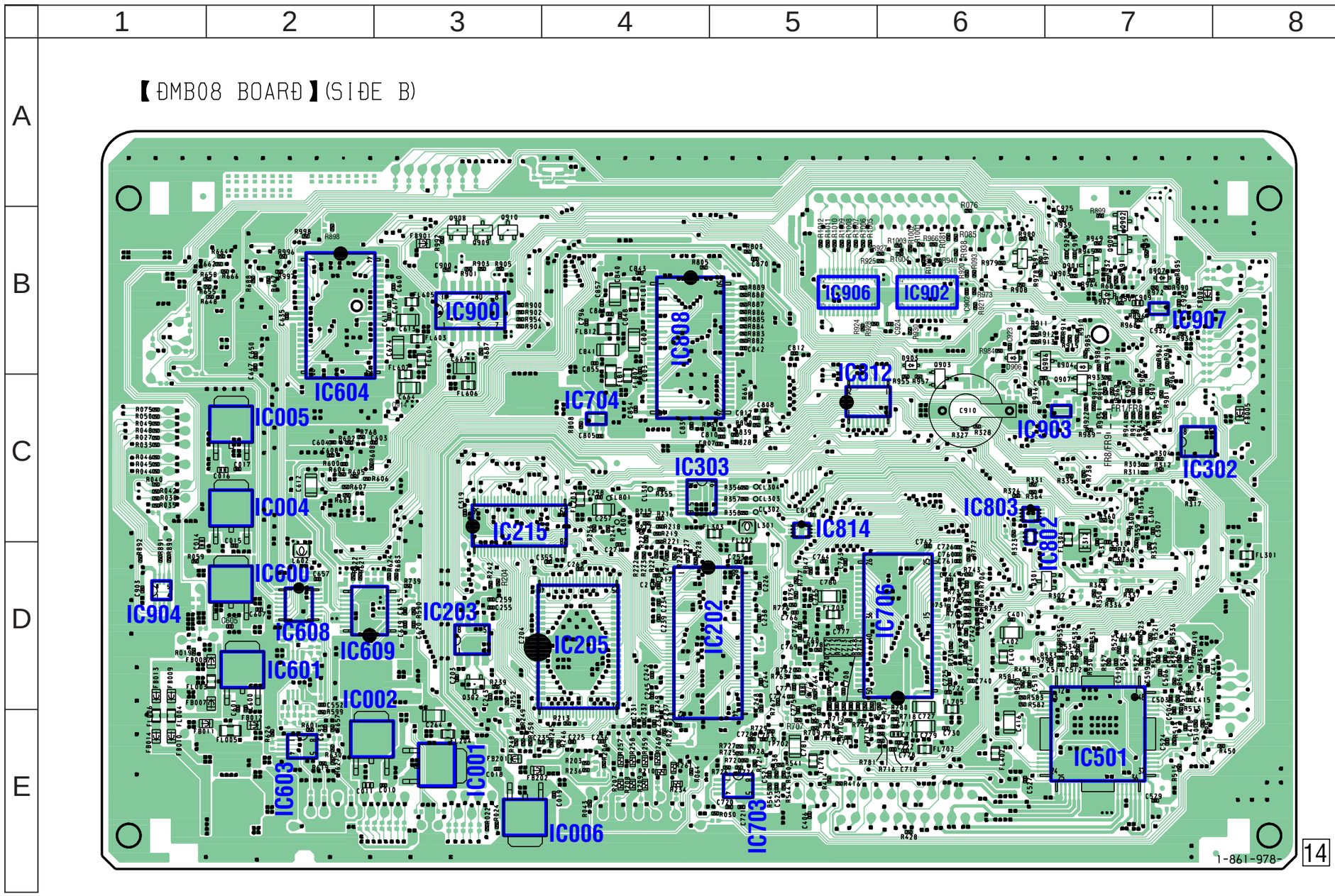



• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D900 | C-2 |
| D901 | C-4 |
| IC206 | D-5 |
| IC301 | C-2 |
| IC401 | D-2 |
| IC402 | D-2 |
| IC605 | C-8 |
| IC606 | C-7 |
| IC607 | B-7 |
| IC612 | B-6 |
| IC701 | D-4 |
| IC801 | B-5 |
| IC813 | C-4 |
| IC901 | B-2 |
| Q914 | C-3 |

## 3-6. PRINTED WIRING BOARD — DMB08 BOARD (SIDE B) —

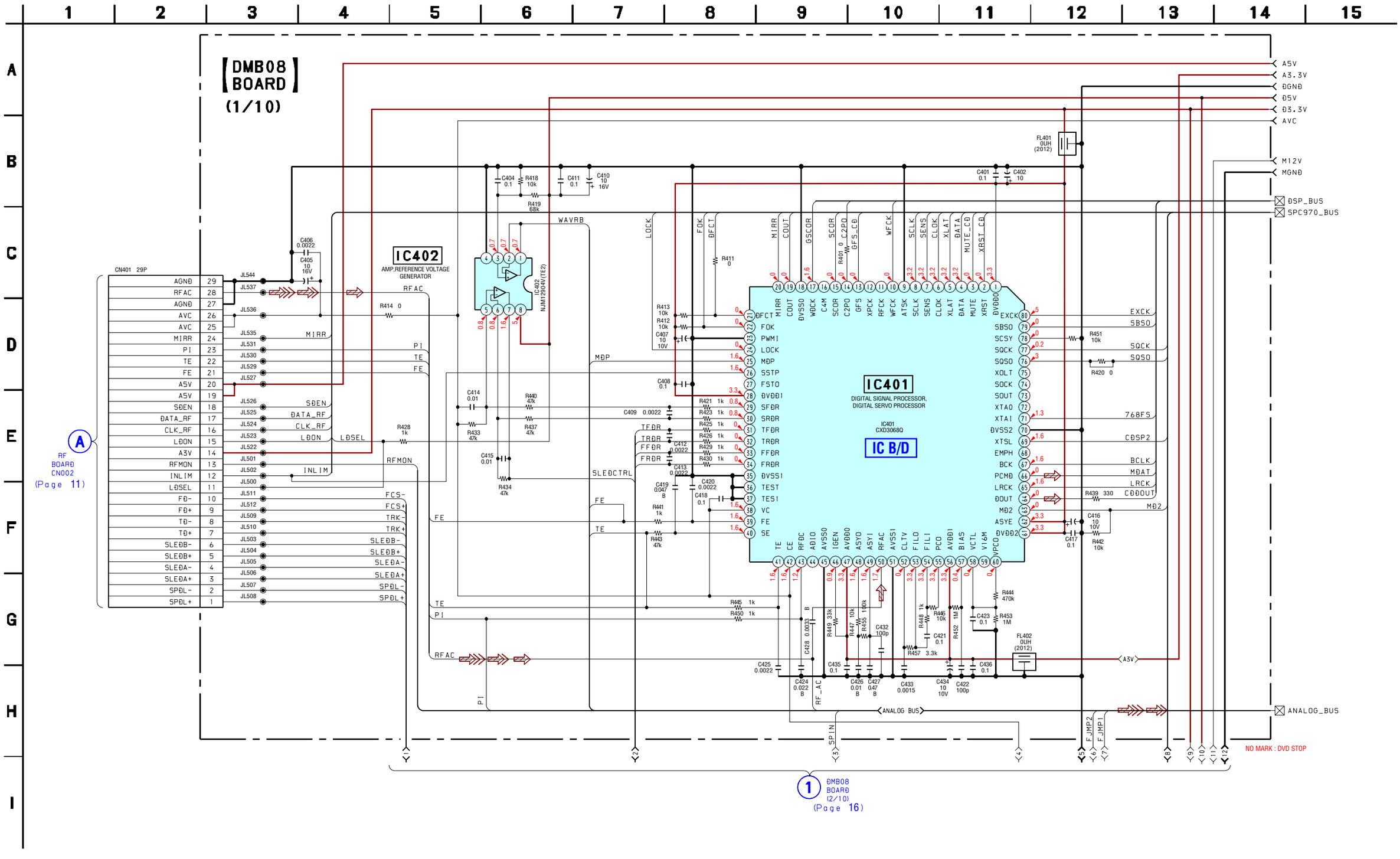
• See page 7 for Circuit Boards Location. :Uses unleaded solder.



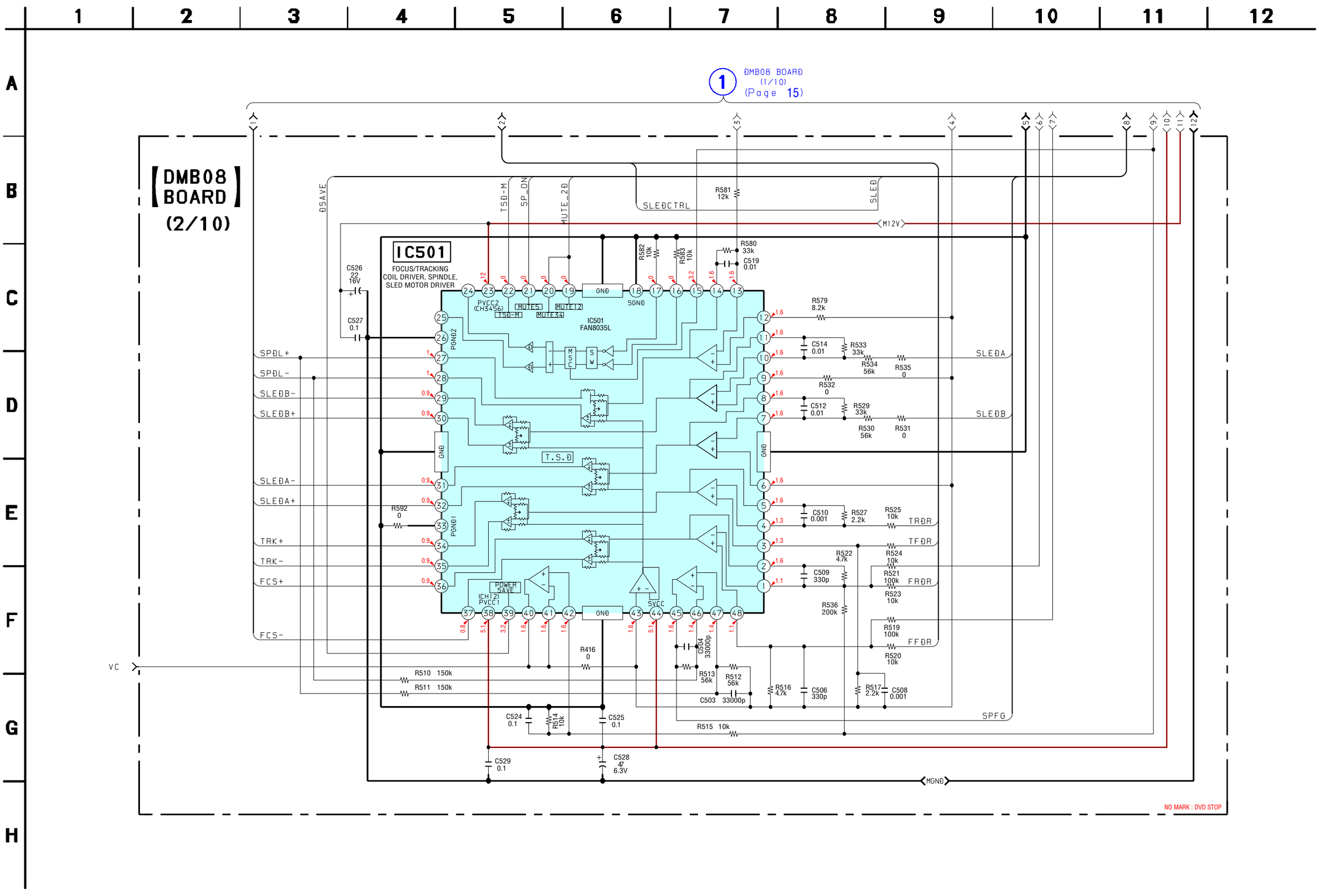

- **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D902 | B-7 |
| D903 | B-6 |
| D904 | C-7 |
| D906 | B-6 |
| D907 | B-7 |
| | |
| IC001 | E-3 |
| IC002 | D-2 |
| IC004 | C-2 |
| IC005 | C-2 |
| IC006 | E-4 |
| IC202 | D-4 |
| IC203 | D-3 |
| IC205 | D-4 |
| IC215 | C-3 |
| IC302 | C-7 |
| IC303 | C-4 |
| IC501 | E-7 |
| IC600 | D-2 |
| IC601 | D-2 |
| IC603 | E-2 |
| IC604 | C-2 |
| IC608 | D-2 |
| IC609 | D-2 |
| IC703 | E-5 |
| IC704 | C-4 |
| IC706 | D-5 |
| IC802 | C-7 |
| IC803 | C-6 |
| IC808 | B-4 |
| IC812 | C-5 |
| IC814 | C-5 |
| IC900 | B-3 |
| IC902 | B-6 |
| IC903 | C-6 |
| IC904 | D-1 |
| IC906 | B-5 |
| IC907 | B-7 |
| | |
| Q301 | D-6 |
| Q302 | D-3 |
| Q900 | B-7 |
| Q901 | B-7 |
| Q902 | B-7 |
| Q903 | B-6 |
| Q906 | B-6 |
| Q907 | C-7 |
| Q908 | B-3 |
| Q909 | B-3 |
| Q910 | B-3 |
| Q913 | B-7 |

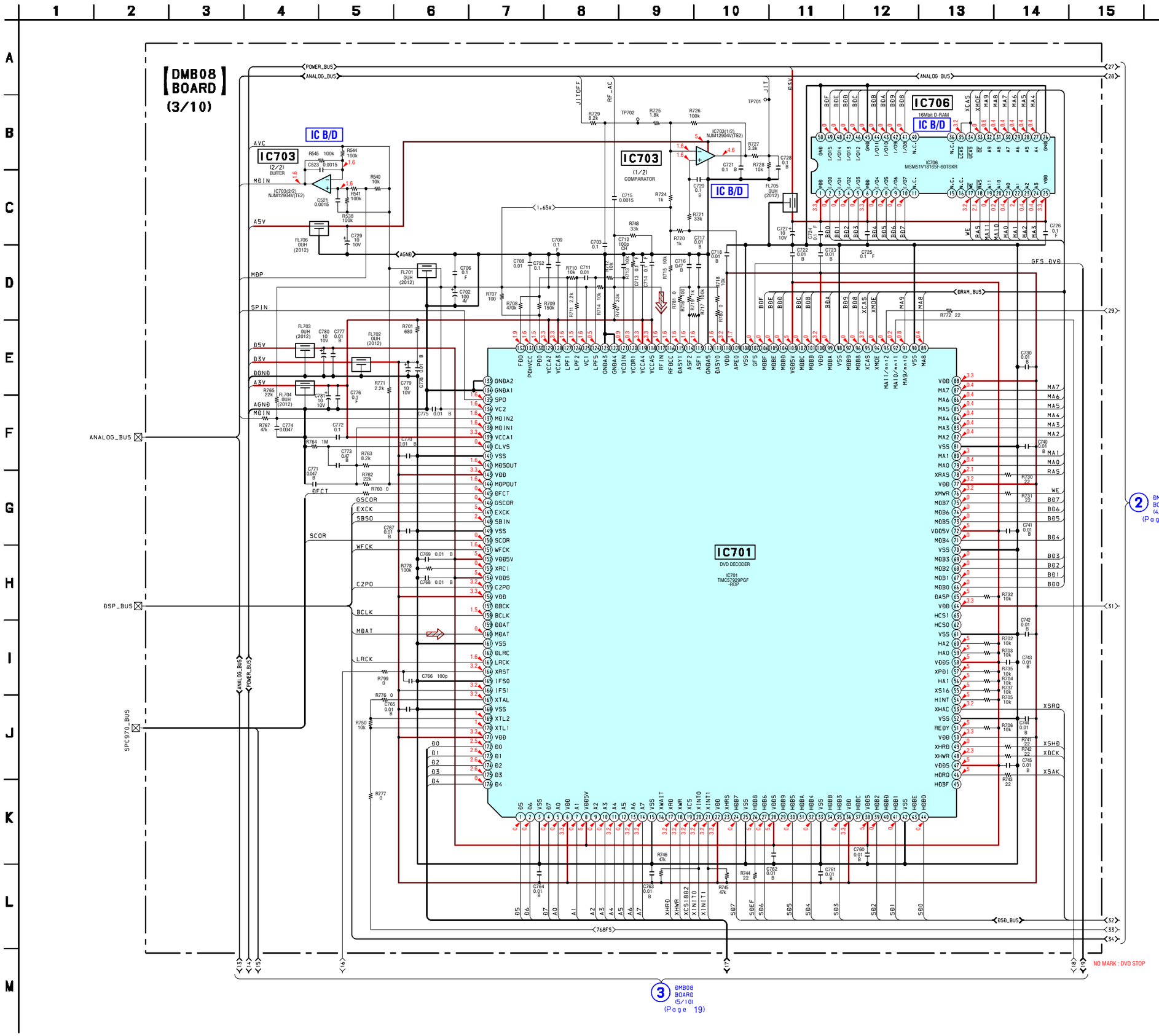
## 3-7. SCHEMATIC DIAGRAM — DMB08 BOARD (1/10) —



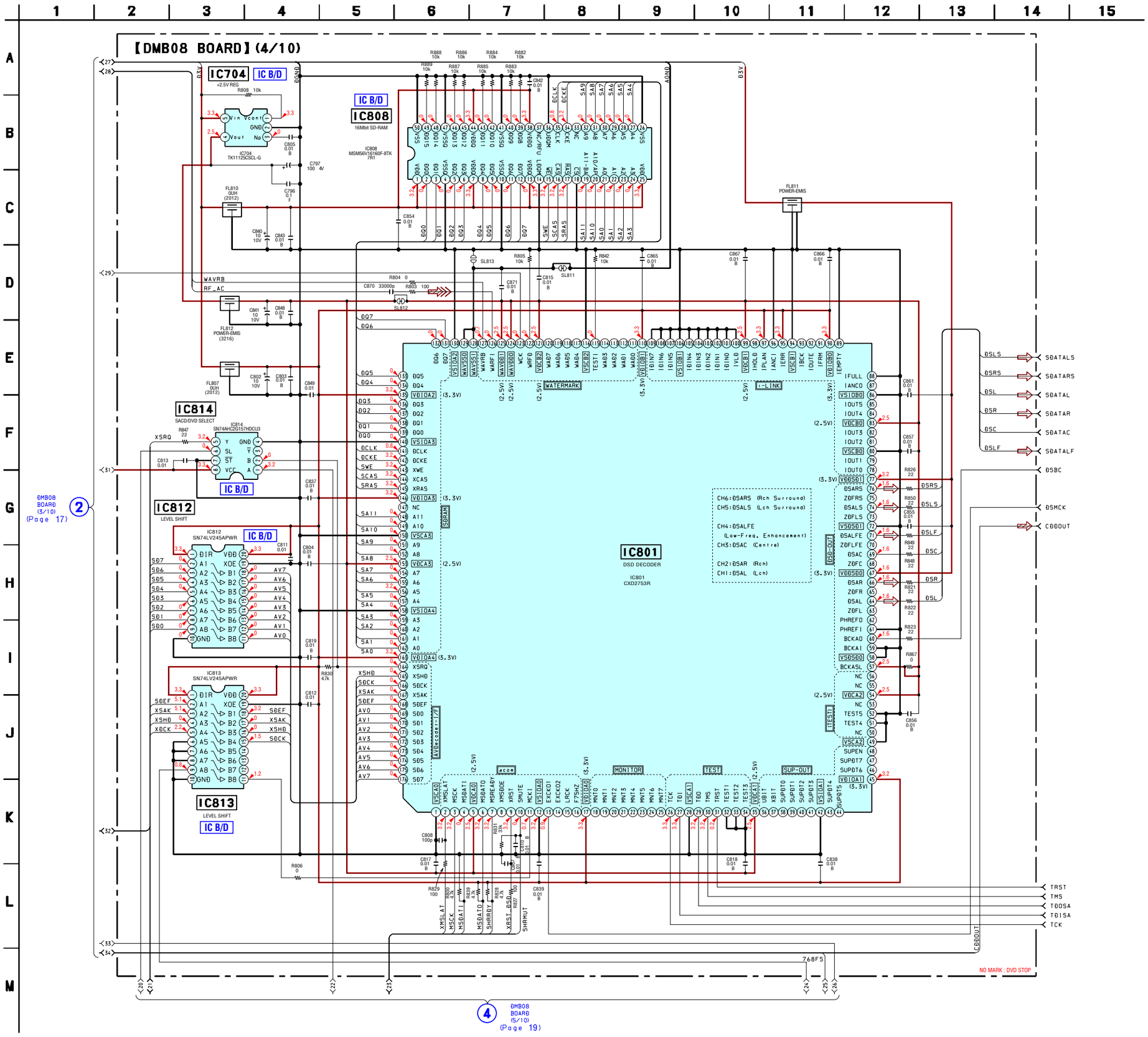
## 3-8. SCHEMATIC DIAGRAM — DMB08 BOARD (2/10) —



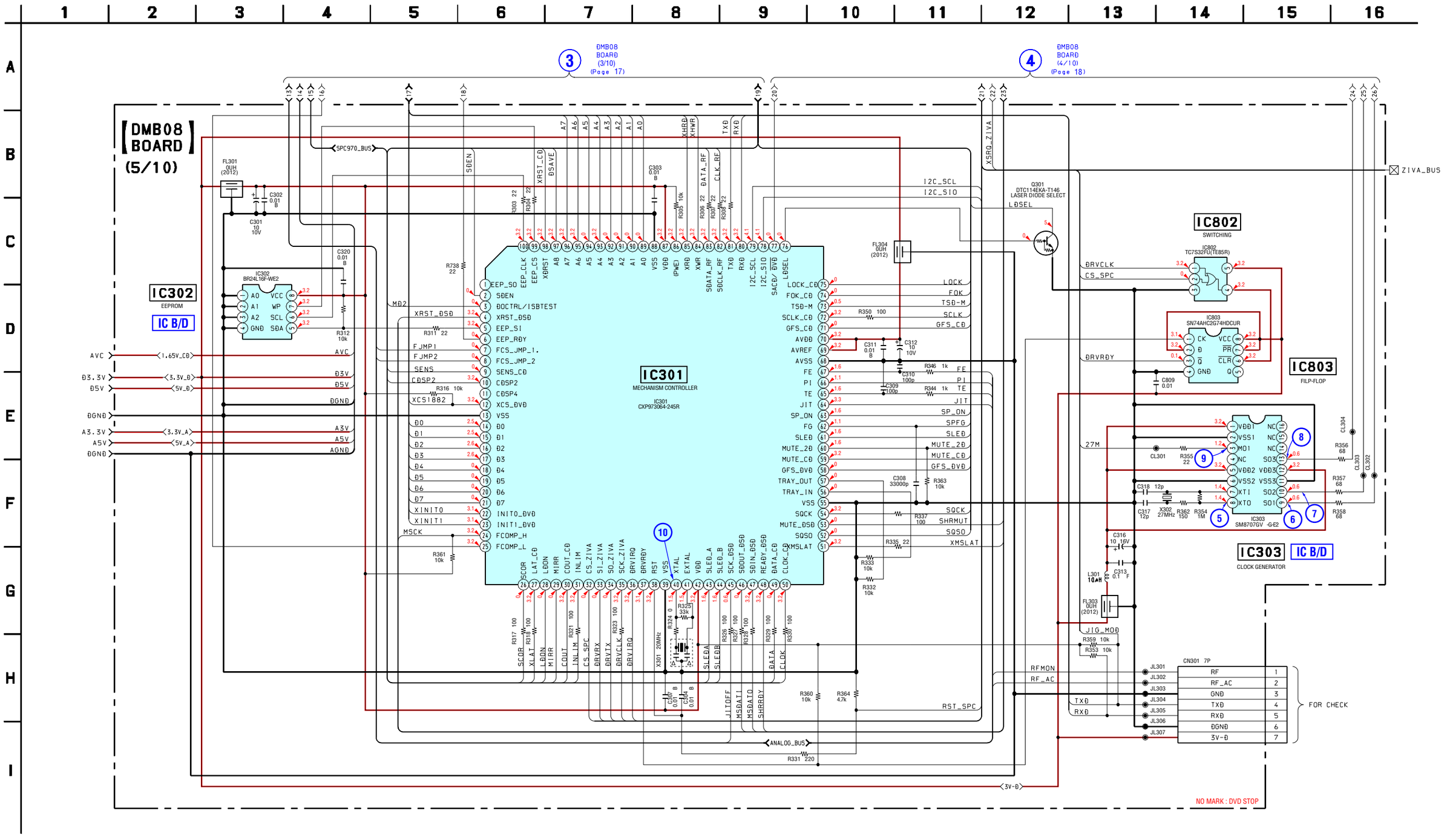
## 3-9. SCHEMATIC DIAGRAM — DMB08 BOARD (3/10) —



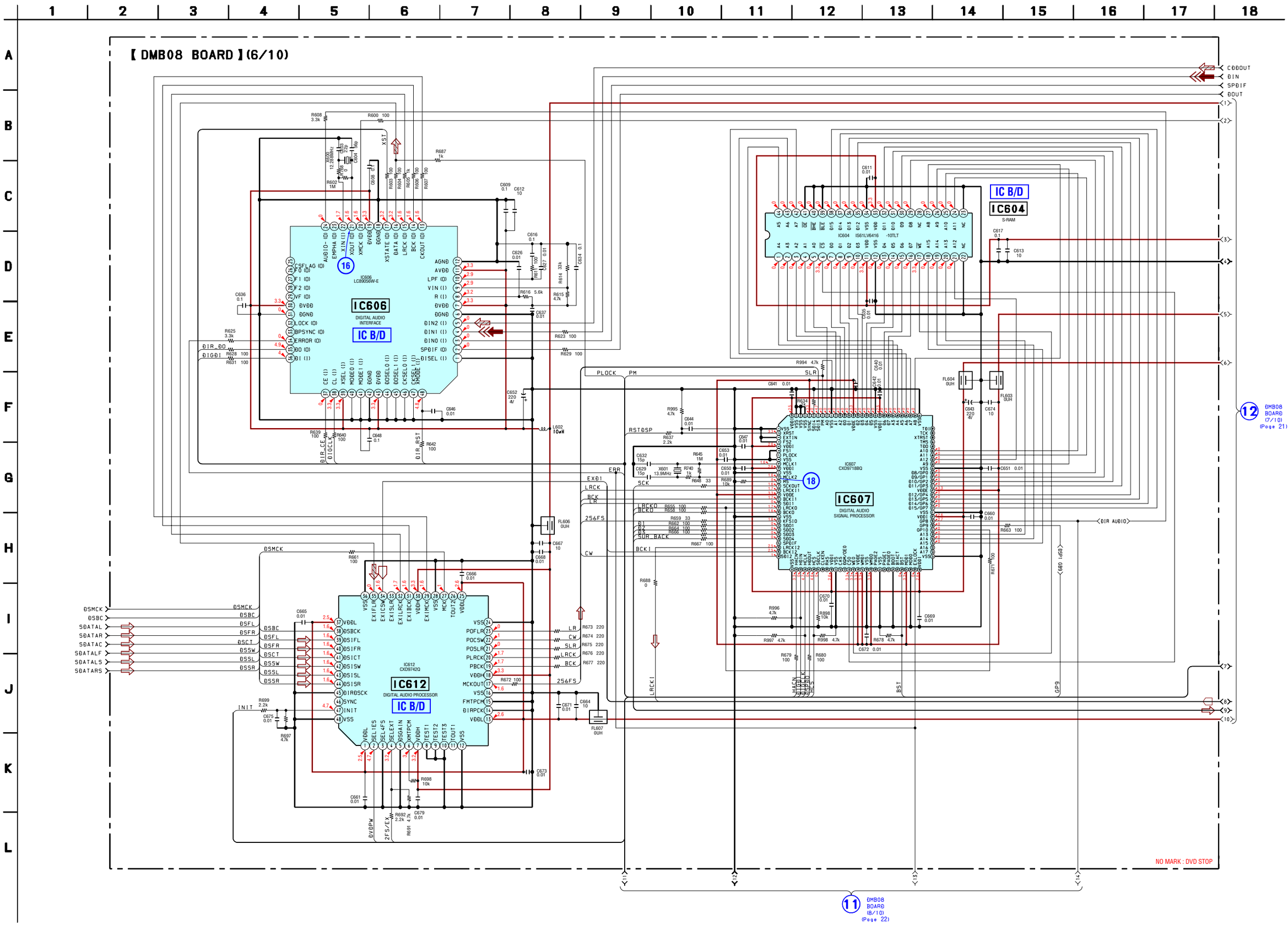
## 3-10. SCHEMATIC DIAGRAM — DMB08 BOARD (4/10) —



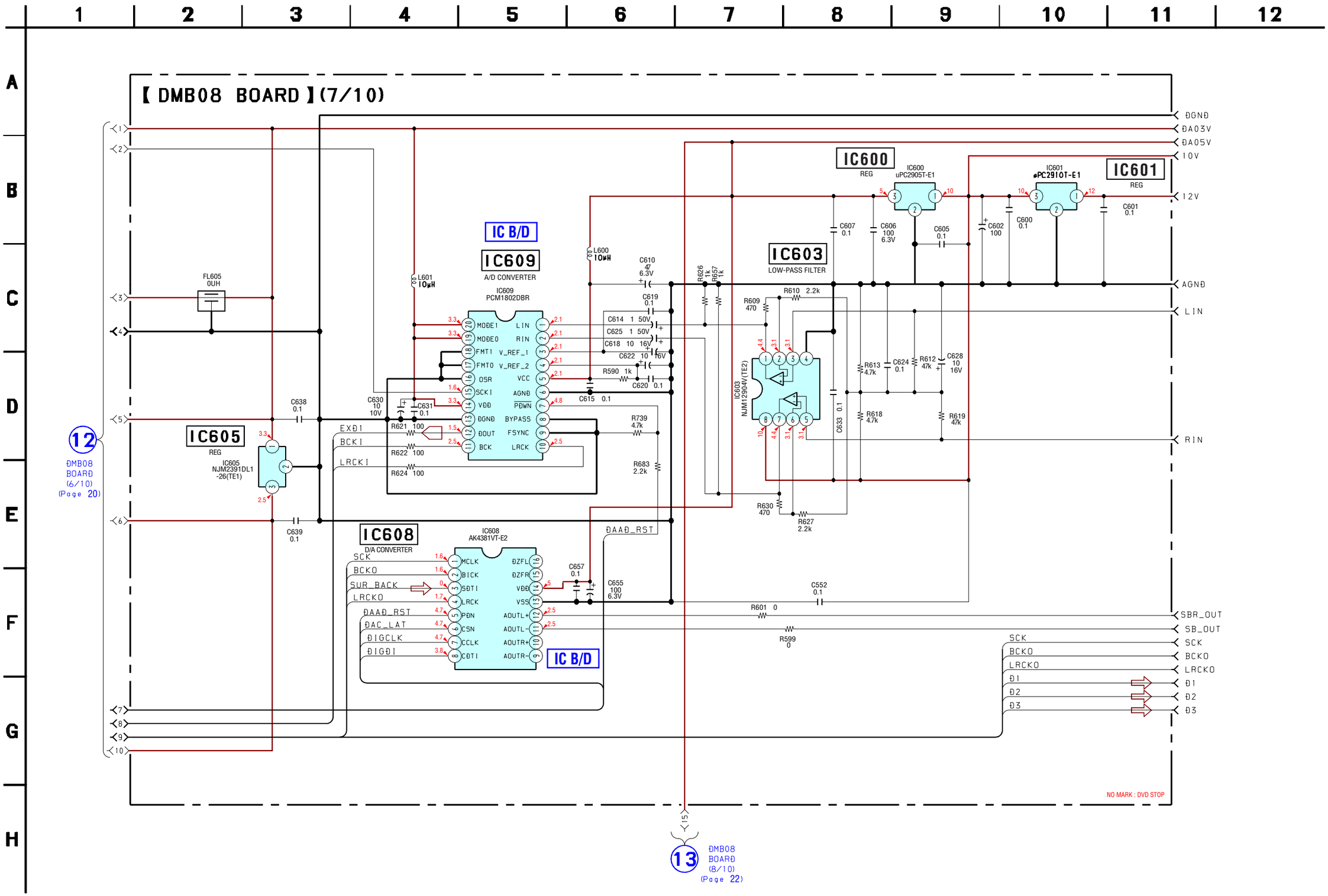
## 3-11. SCHEMATIC DIAGRAM — DMB08 BOARD (5/10) —



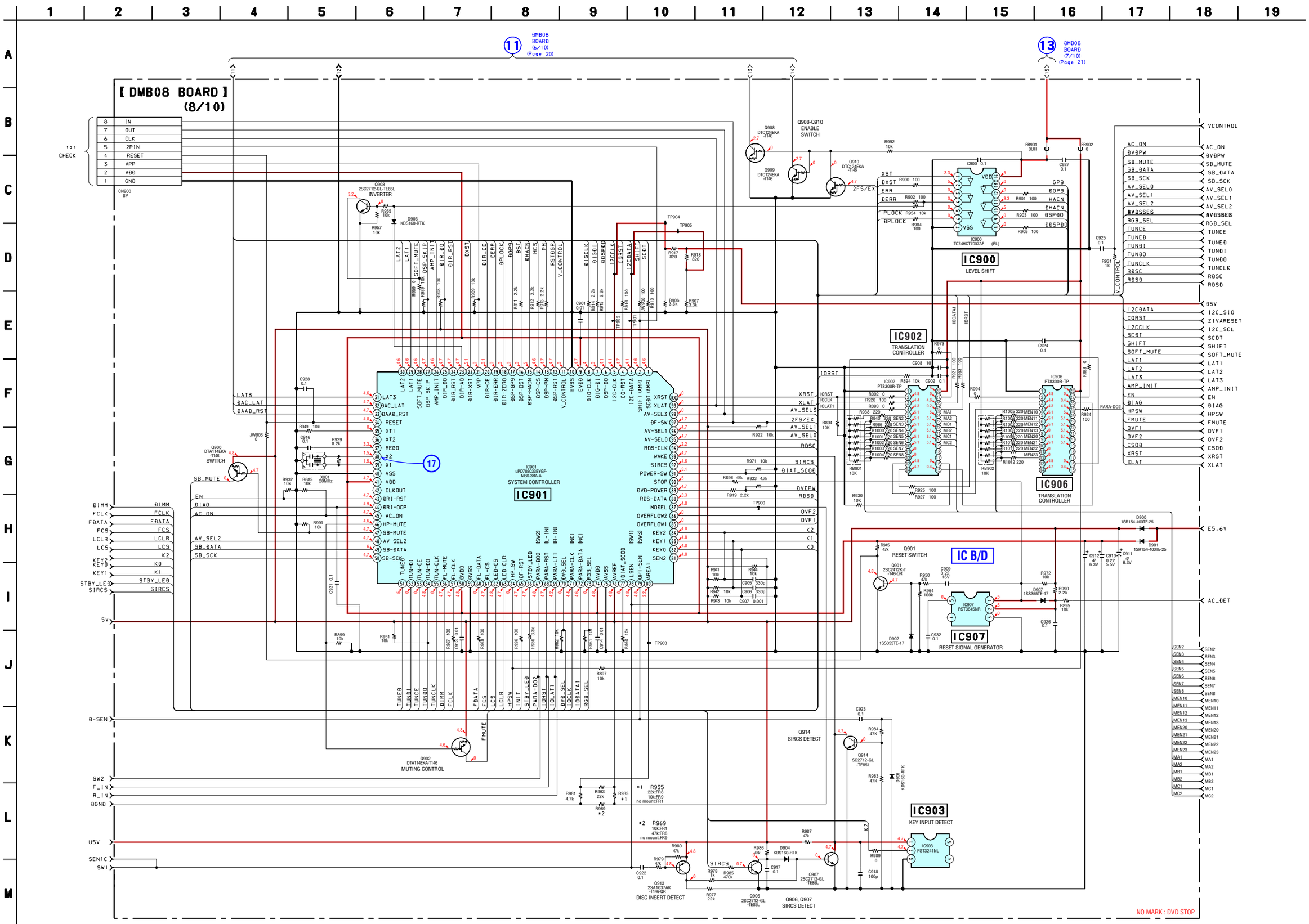
## 3-12. SCHEMATIC DIAGRAM — DMB08 BOARD (6/10) —



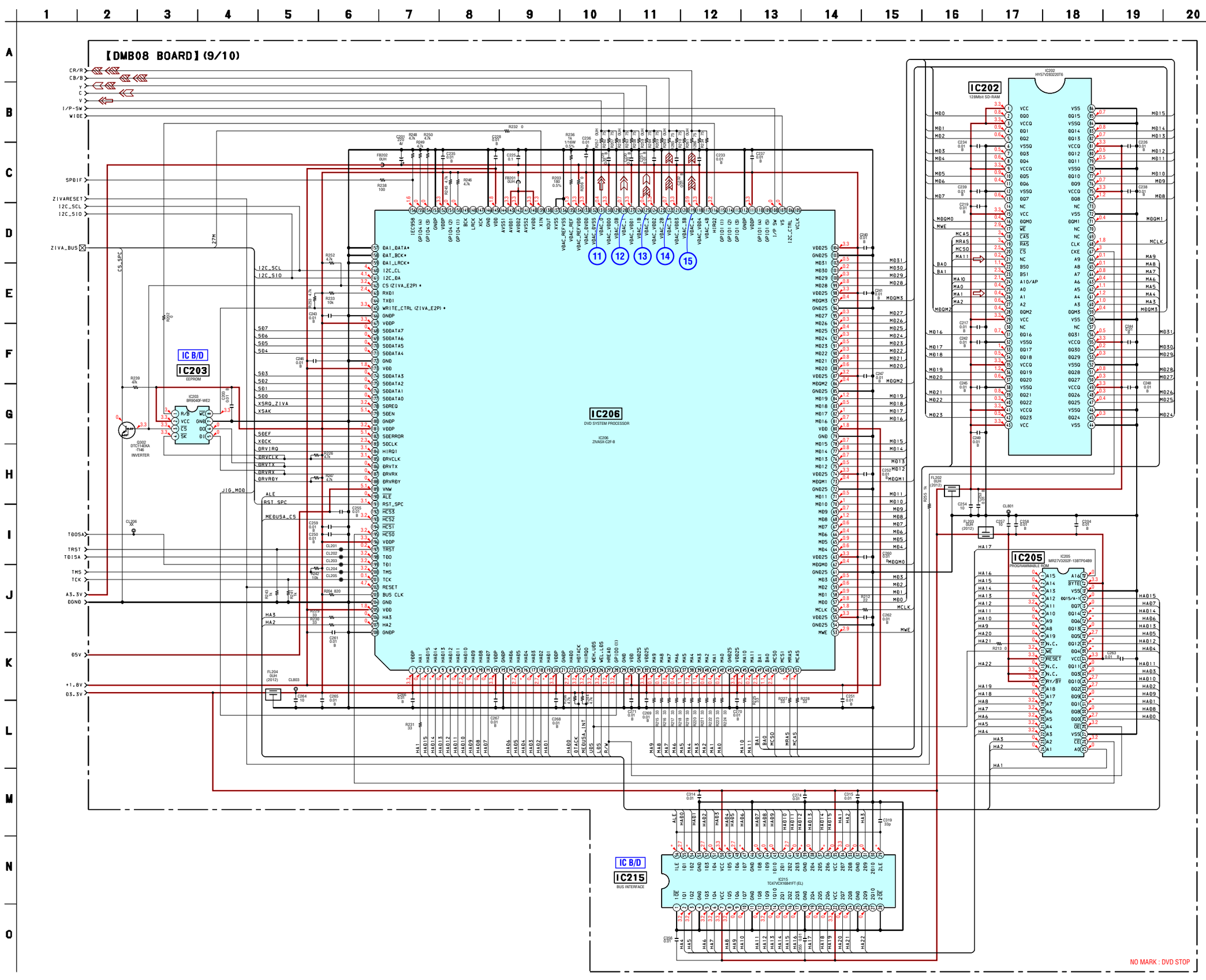
## 3-13. SCHEMATIC DIAGRAM — DMB08 BOARD (7/10) —



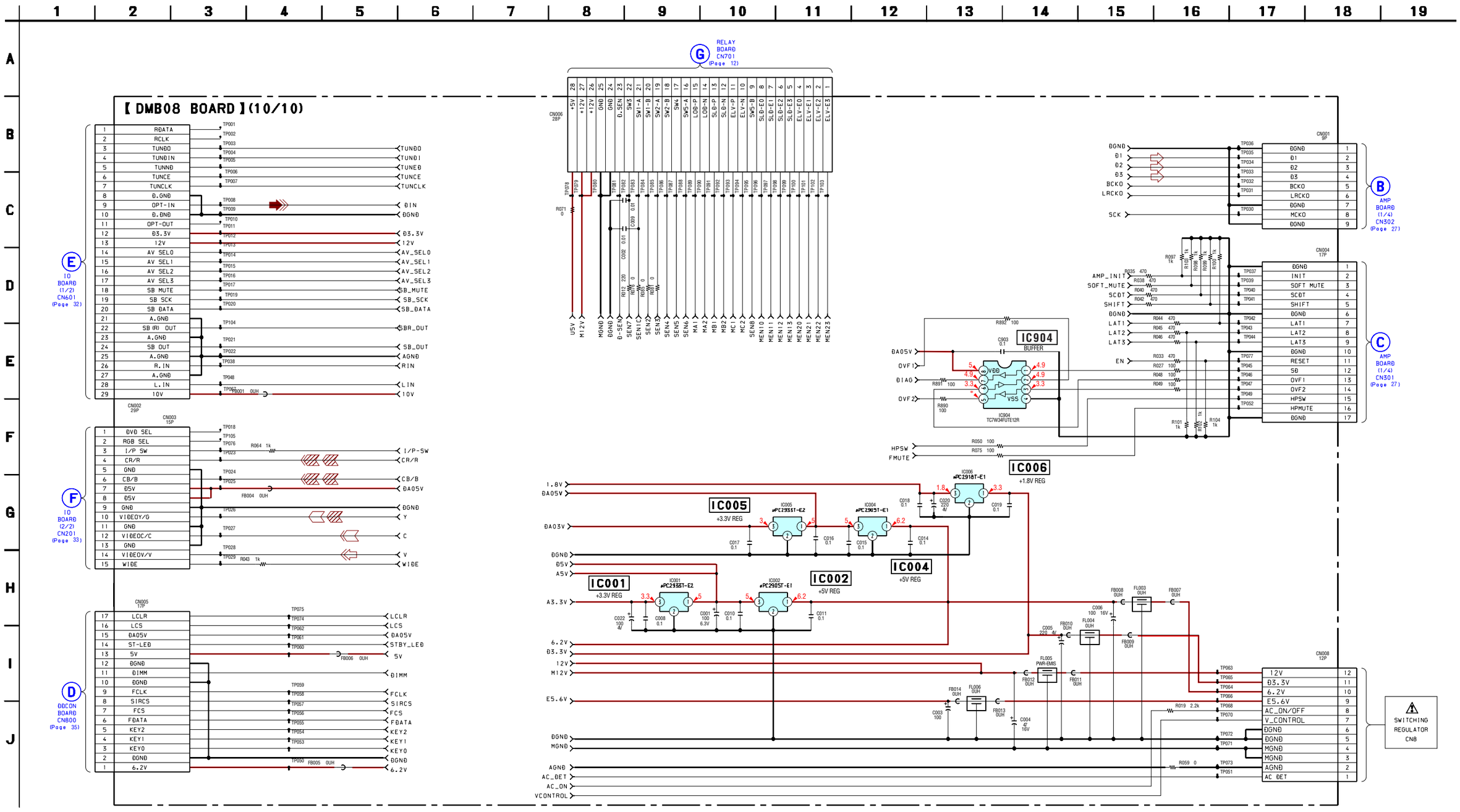
## 3-14. SCHEMATIC DIAGRAM — DMB08 BOARD (8/10) —



## 3-15. SCHEMATIC DIAGRAM — DMB08 BOARD (9/10) —



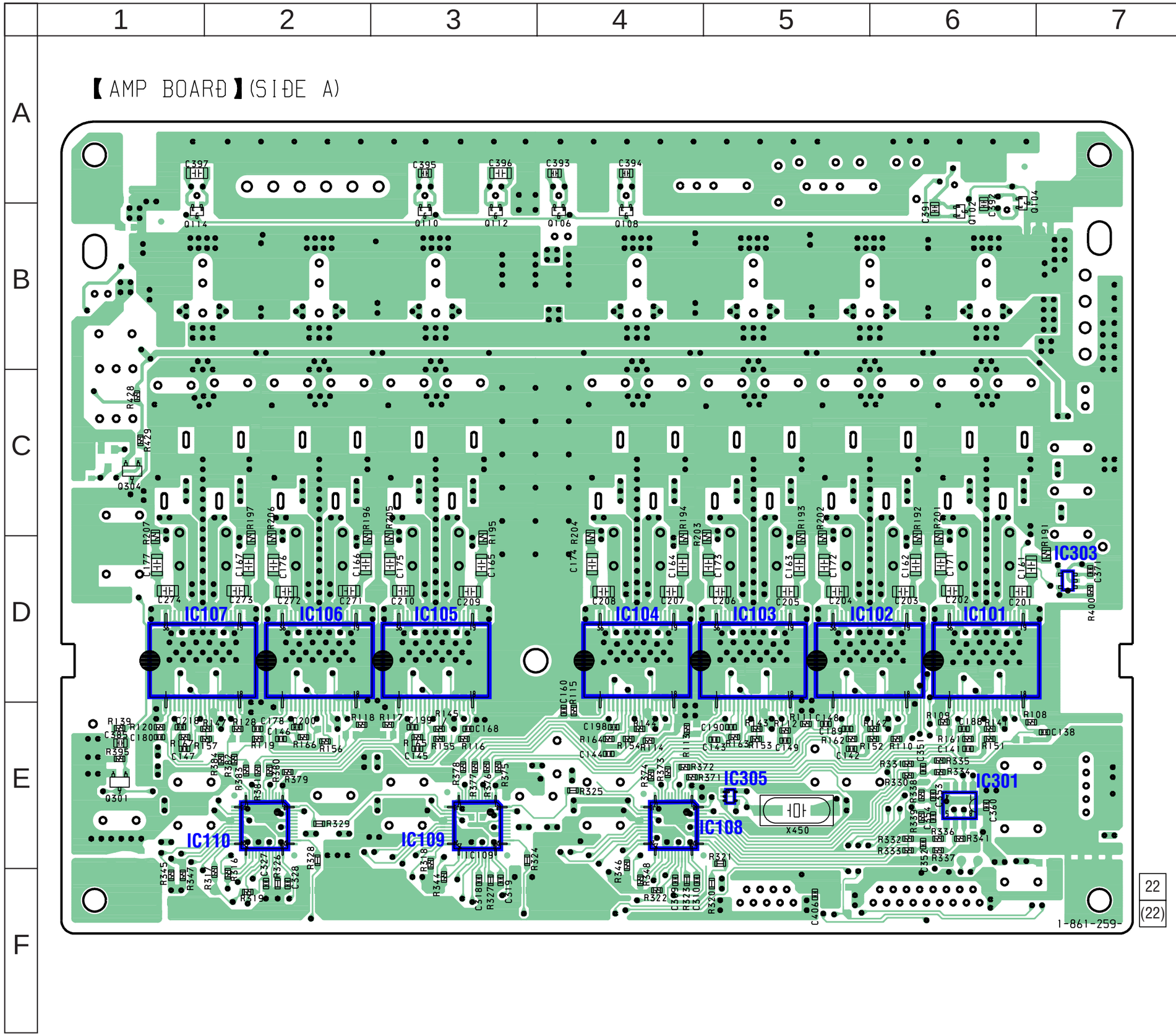
## 3-16. SCHEMATIC DIAGRAM — DMB08 BOARD (10/10) —



### 3-17. PRINTED WIRING BOARD — AMP BOARD (SIDE A) —

• See page 7 for Circuit Boards Location. :Uses unleaded solder.

【AMP BOARD】(SIDE A)

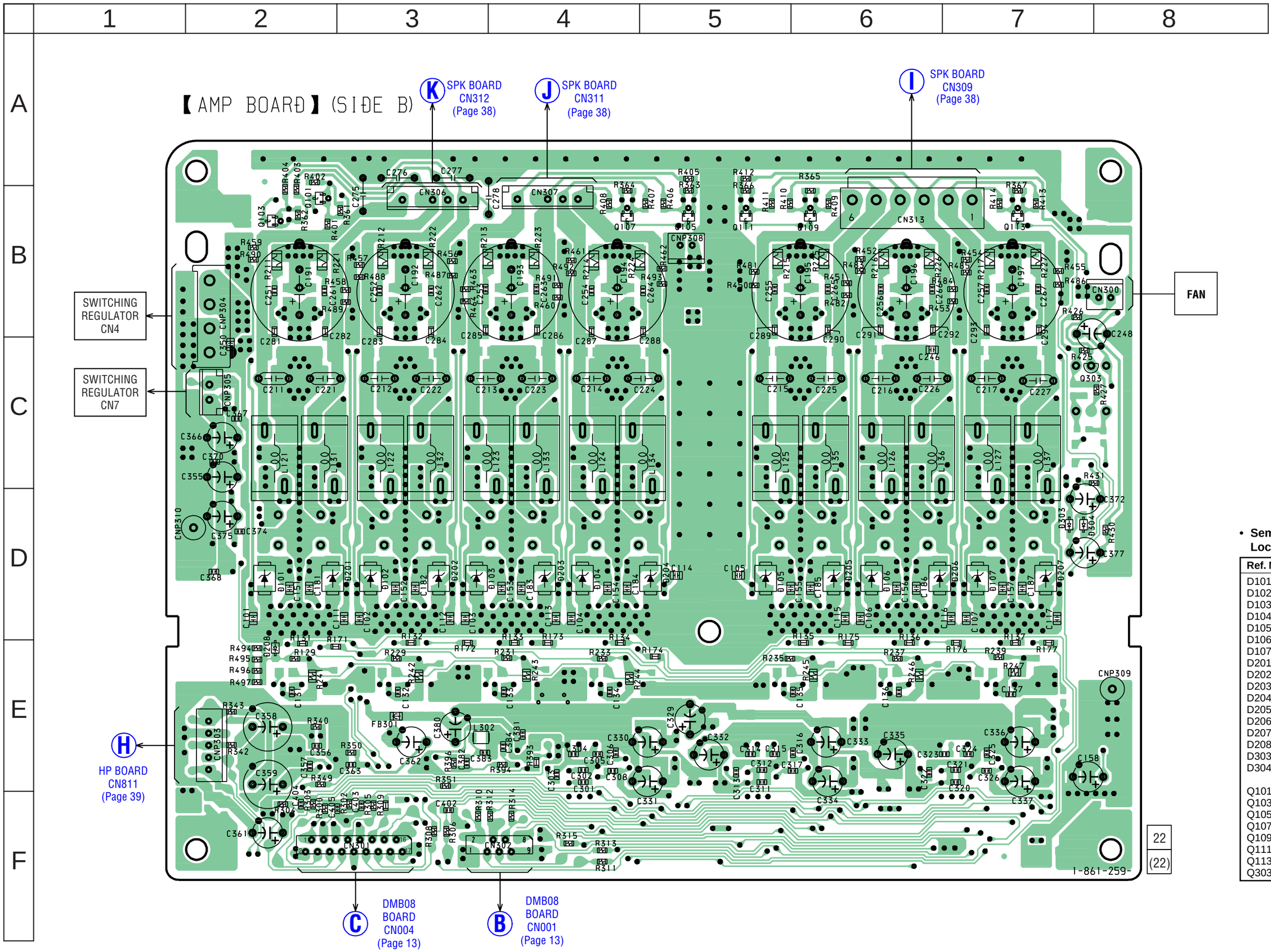



- **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| IC101 | D-6 |
| IC102 | D-5 |
| IC103 | D-5 |
| IC104 | D-4 |
| IC105 | D-3 |
| IC106 | D-2 |
| IC107 | D-1 |
| IC108 | E-4 |
| IC109 | E-3 |
| IC110 | E-2 |
| IC301 | E-6 |
| IC303 | C-7 |
| IC305 | E-5 |
| Q102 | B-6 |
| Q104 | B-7 |
| Q106 | B-4 |
| Q108 | B-4 |
| Q110 | B-3 |
| Q112 | B-3 |
| Q114 | B-1 |
| Q301 | E-1 |
| Q304 | C-1 |

### 3-18. PRINTED WIRING BOARD — AMP BOARD (SIDE B) —

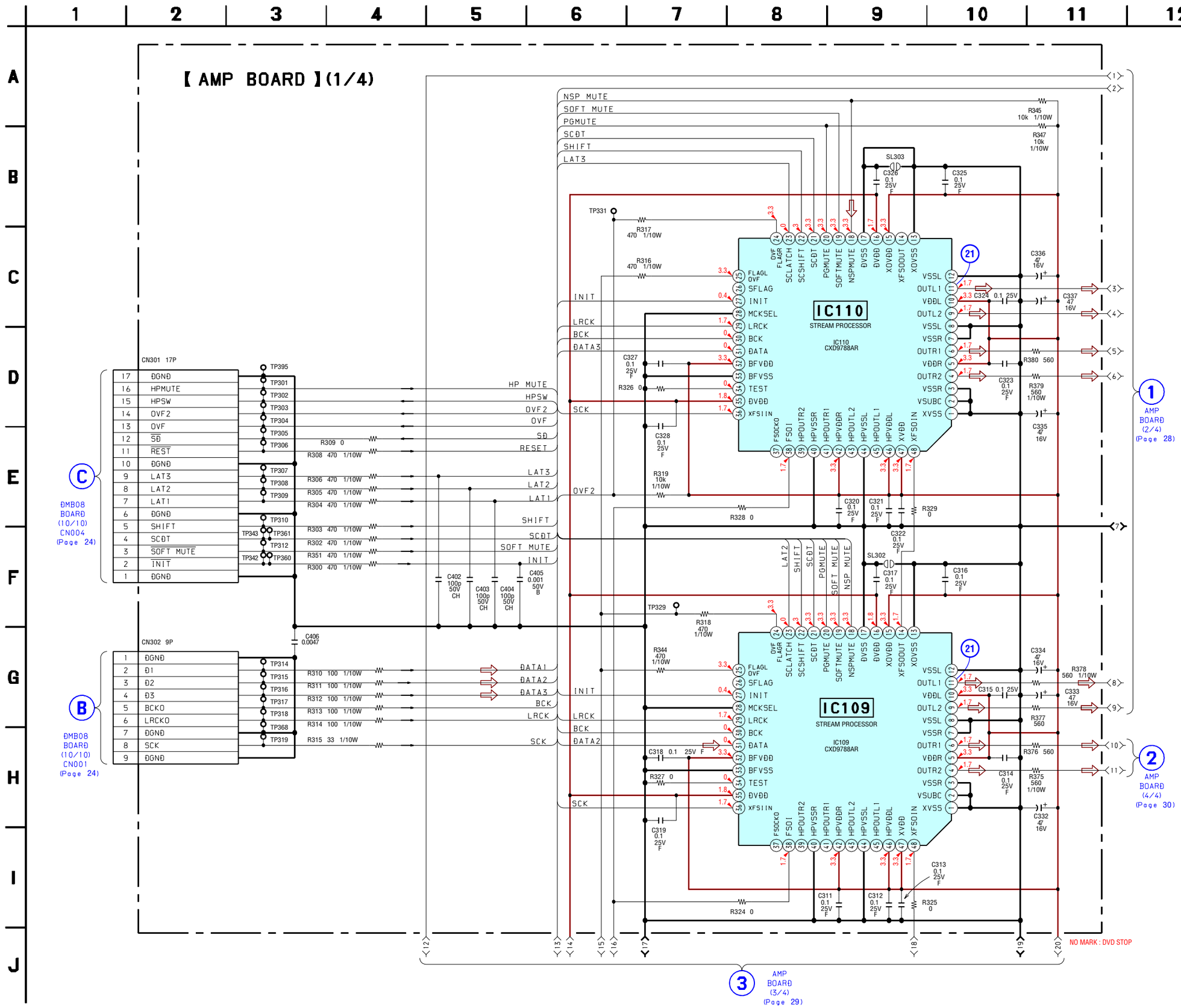
• See page 7 for Circuit Boards Location. :Uses unleaded solder.



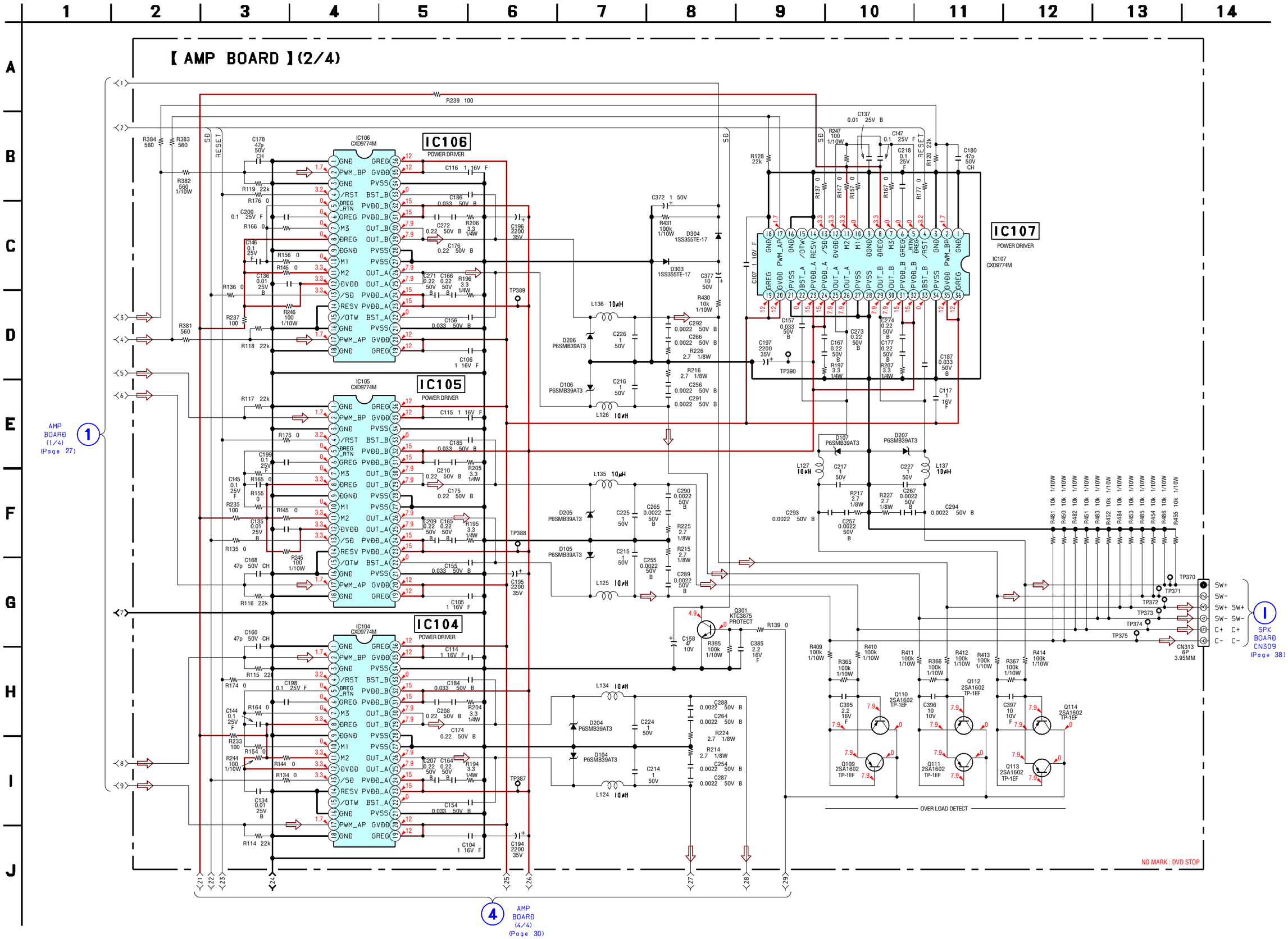

- Semiconductor Location

| Ref. No. | Location |
|---|---|
| D101 | D-2 |
| D102 | D-3 |
| D103 | D-4 |
| D104 | D-4 |
| D105 | D-5 |
| D106 | D-6 |
| D107 | D-7 |
| D201 | D-3 |
| D202 | D-3 |
| D203 | D-4 |
| D204 | D-5 |
| D205 | D-6 |
| D206 | D-7 |
| D207 | D-7 |
| D208 | E-2 |
| D303 | D-7 |
| D304 | D-7 |
| Q101 | B-2 |
| Q103 | B-2 |
| Q105 | B-5 |
| Q107 | B-4 |
| Q109 | B-6 |
| Q111 | B-5 |
| Q113 | B-7 |
| Q303 | C-7 |

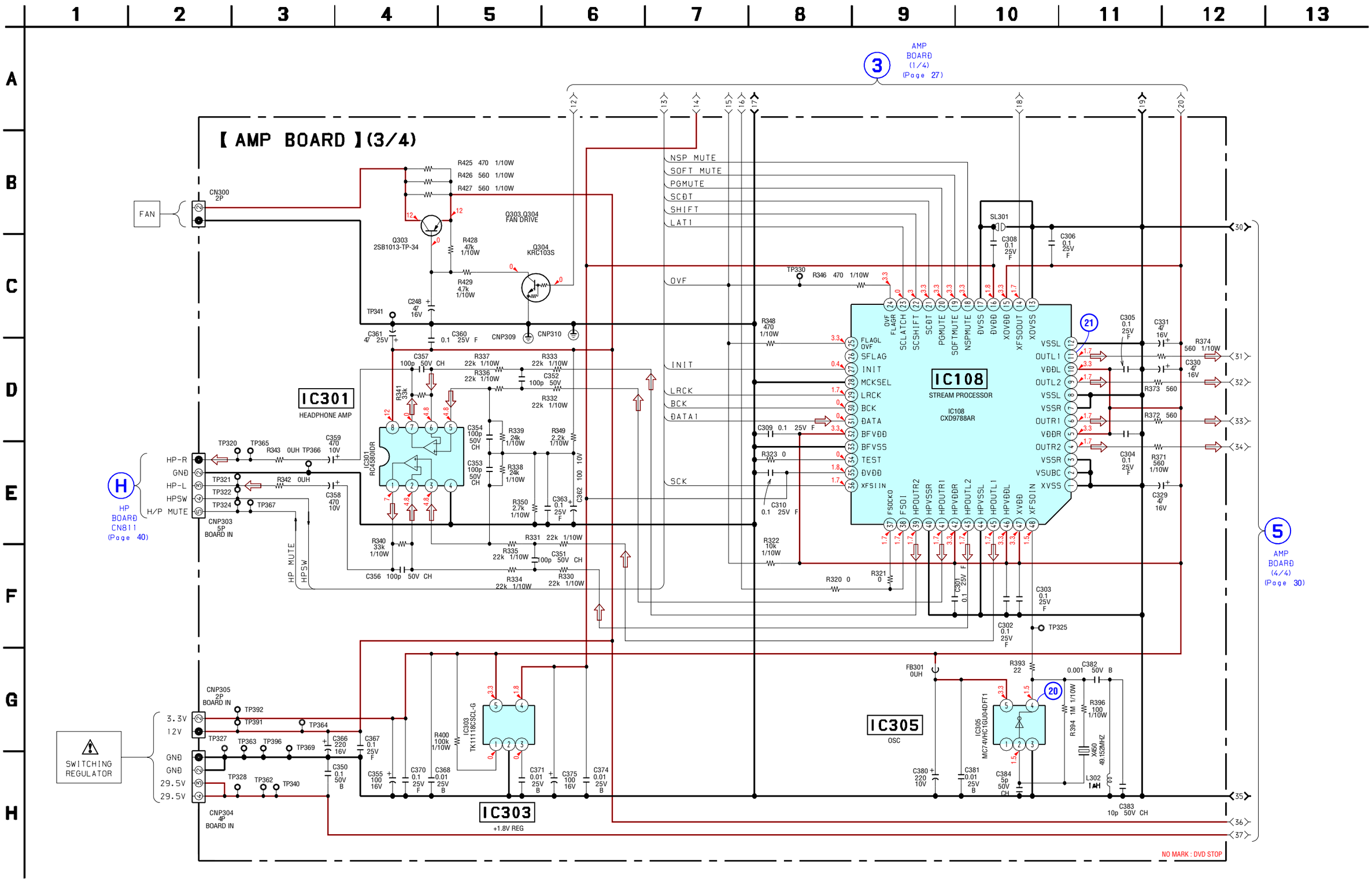
## 3-19. SCHEMATIC DIAGRAM — AMP BOARD (1/4) —



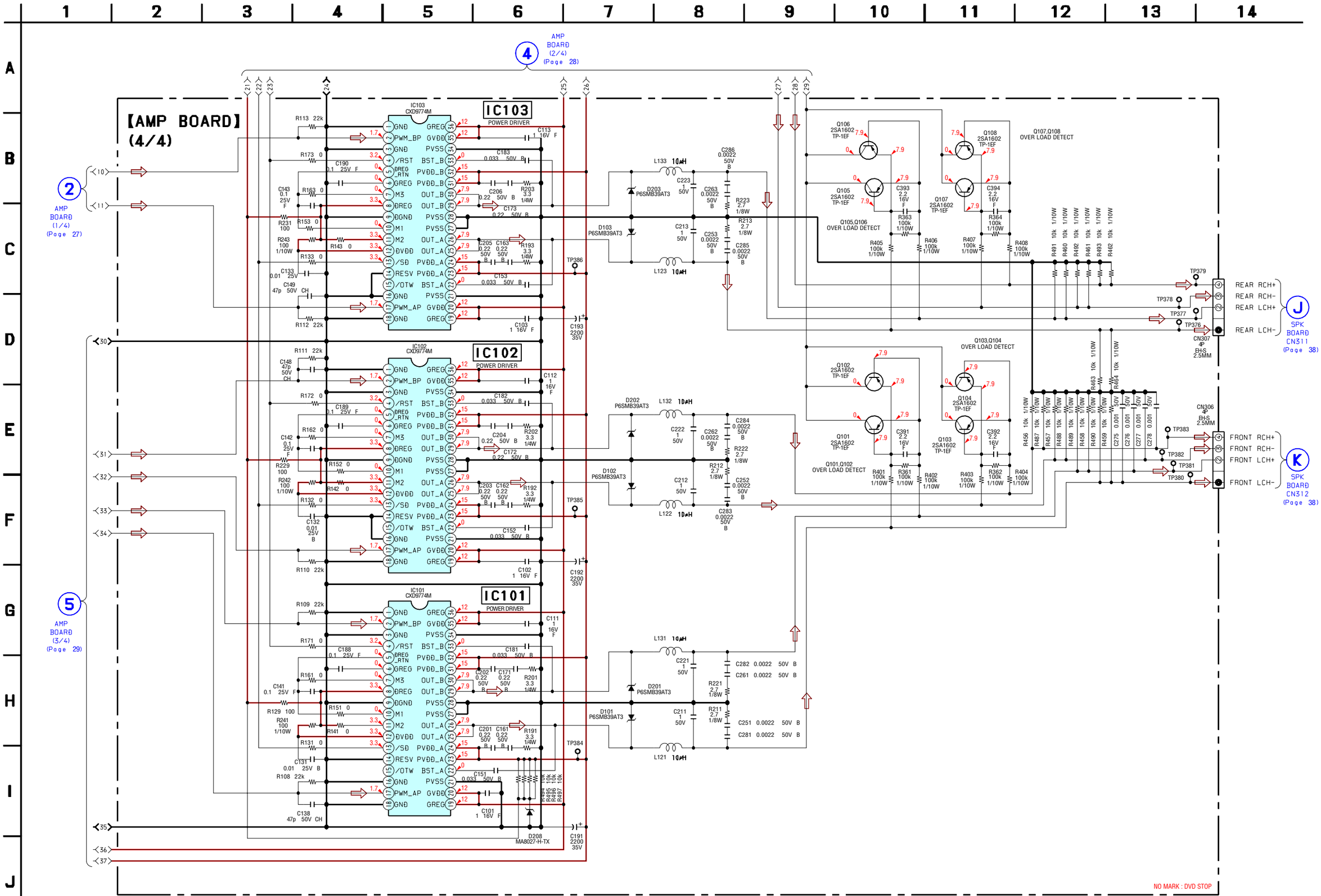
## 3-20. SCHEMATIC DIAGRAM — AMP BOARD (2/4) —



## 3-21. SCHEMATIC DIAGRAM — AMP BOARD (3/4) —



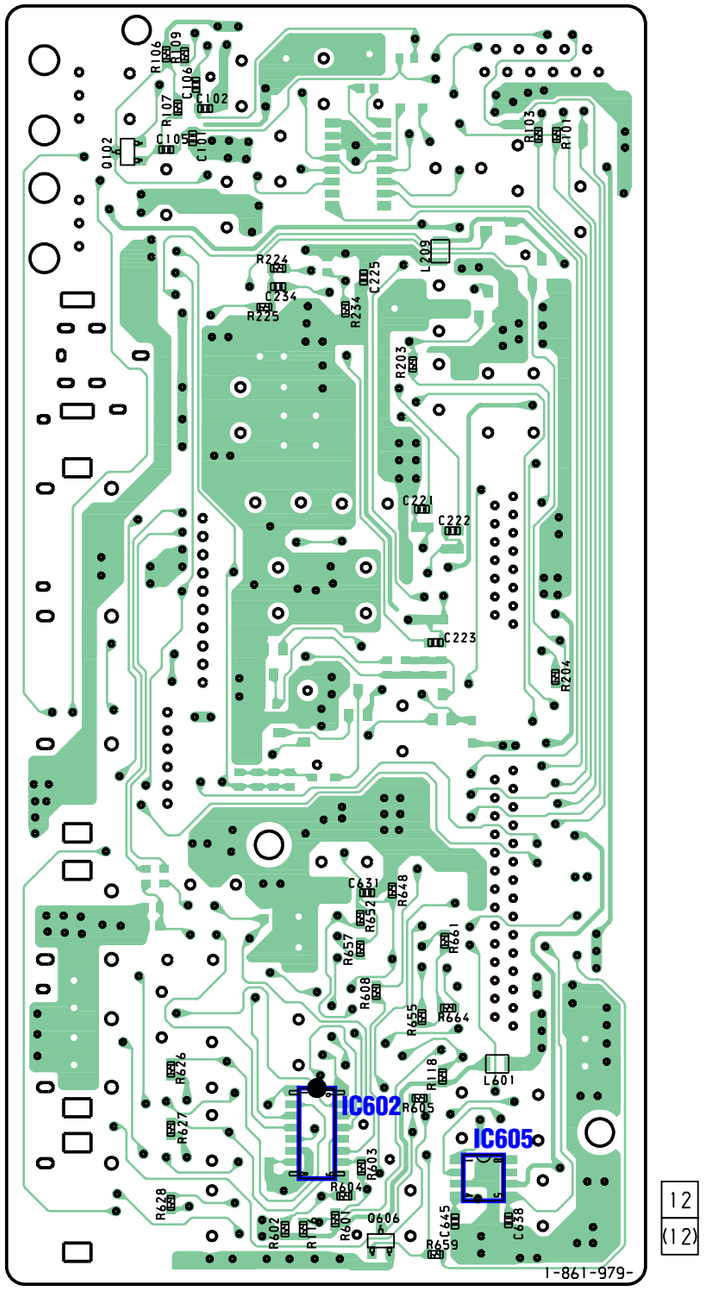
## 3-22. SCHEMATIC DIAGRAM — AMP BOARD (4/4) —



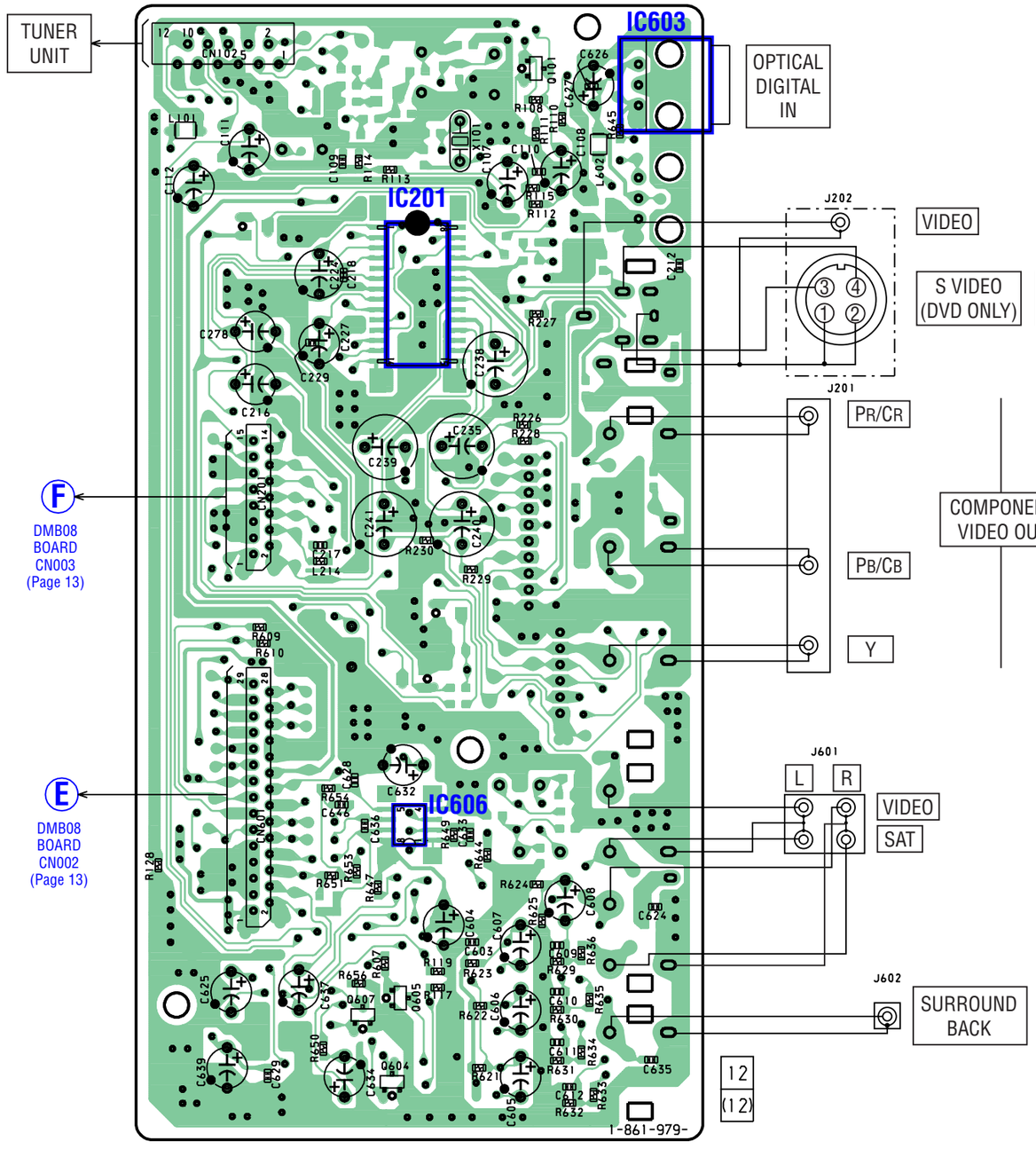
## 3-23. PRINTED WIRING BOARD — IO BOARD —

• See page 7 for Circuit Boards Location. :Uses unleaded solder.

【IO BOARD】(SIDE A)



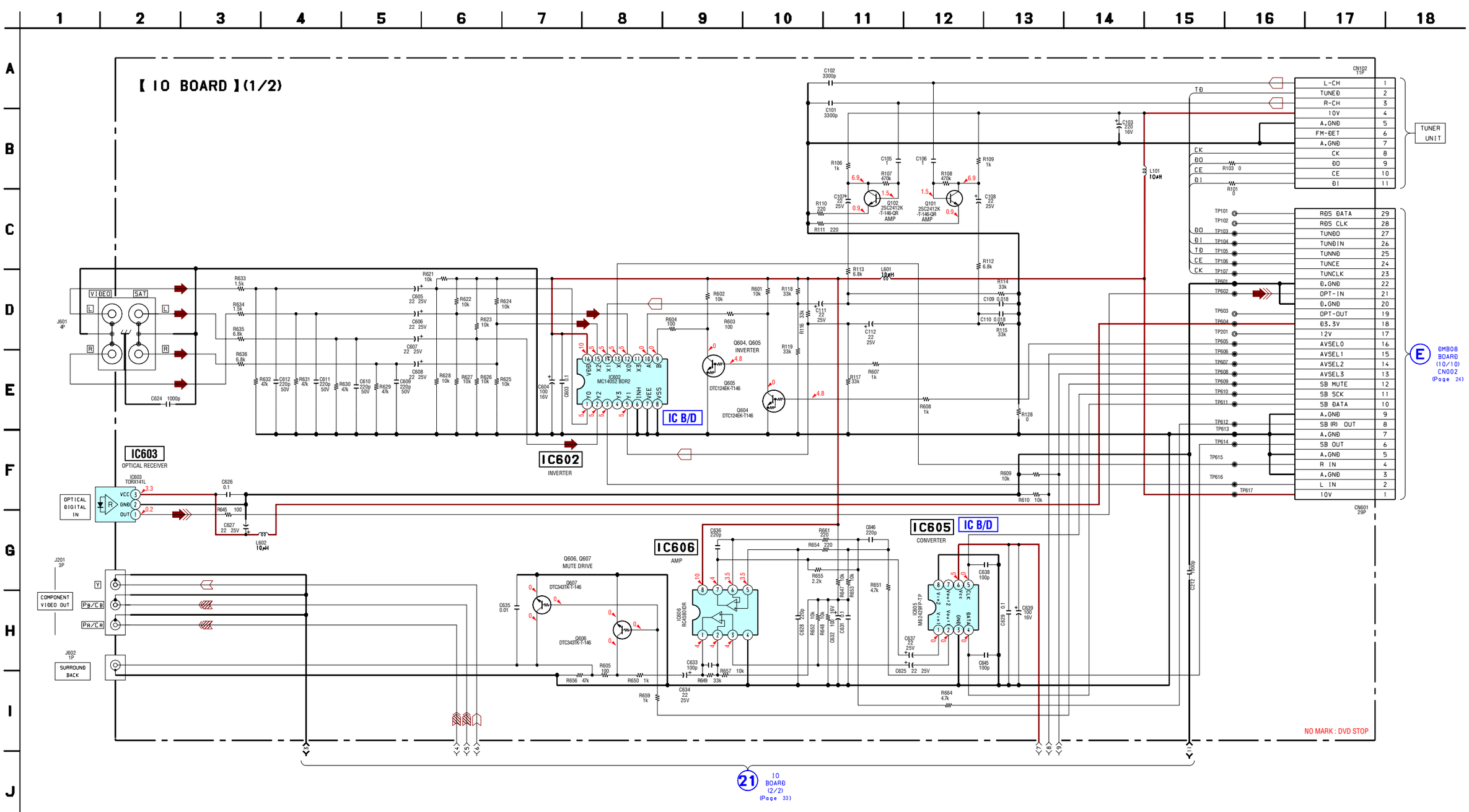

【IO BOARD】(SIDE B)



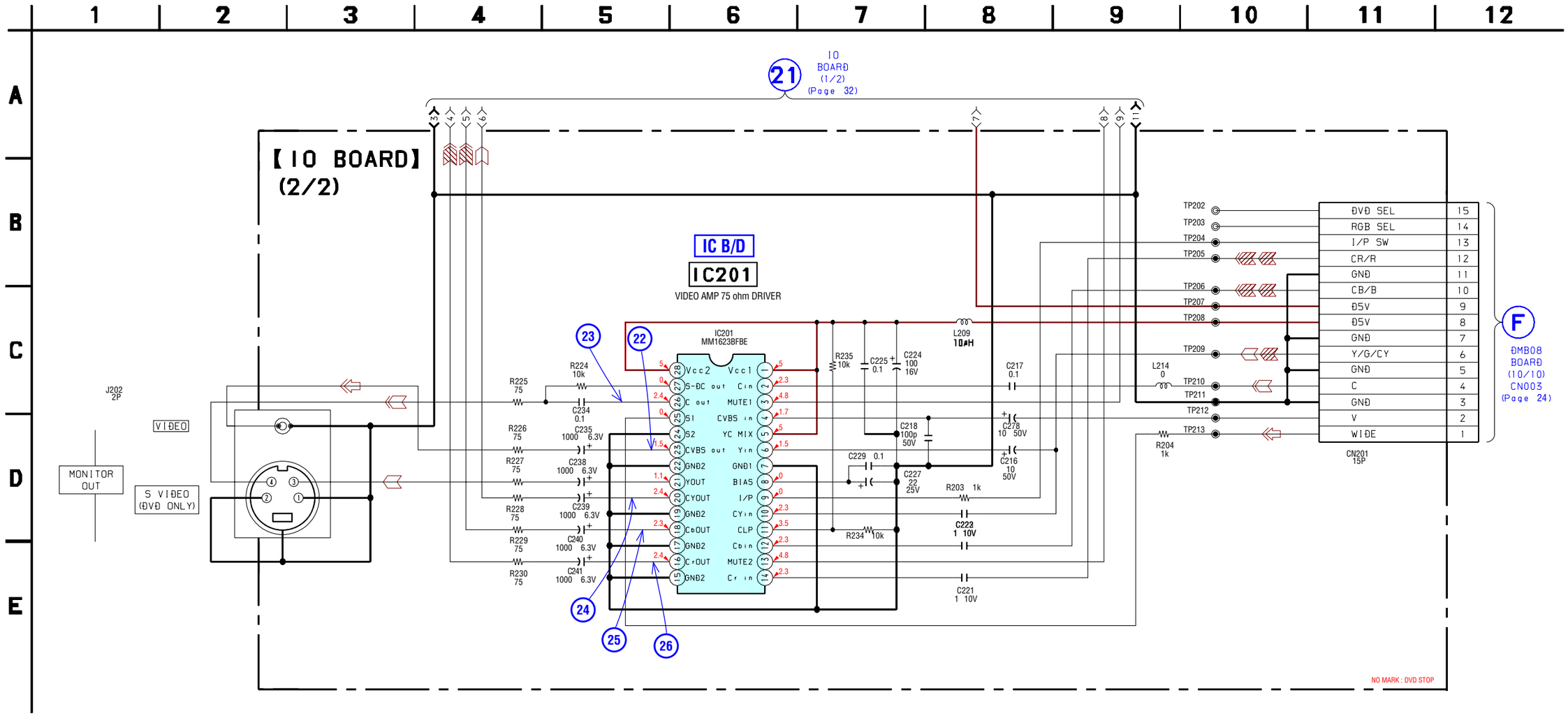

• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| IC201 | B-6 |
| IC602 | F-2 |
| IC603 | A-7 |
| IC605 | F-3 |
| IC606 | E-6 |
| Q101 | A-7 |
| Q102 | B-1 |
| Q604 | F-6 |
| Q605 | F-6 |
| Q606 | F-3 |
| Q607 | F-6 |

## 3-24. SCHEMATIC DIAGRAM — IO BOARD (1/2) —



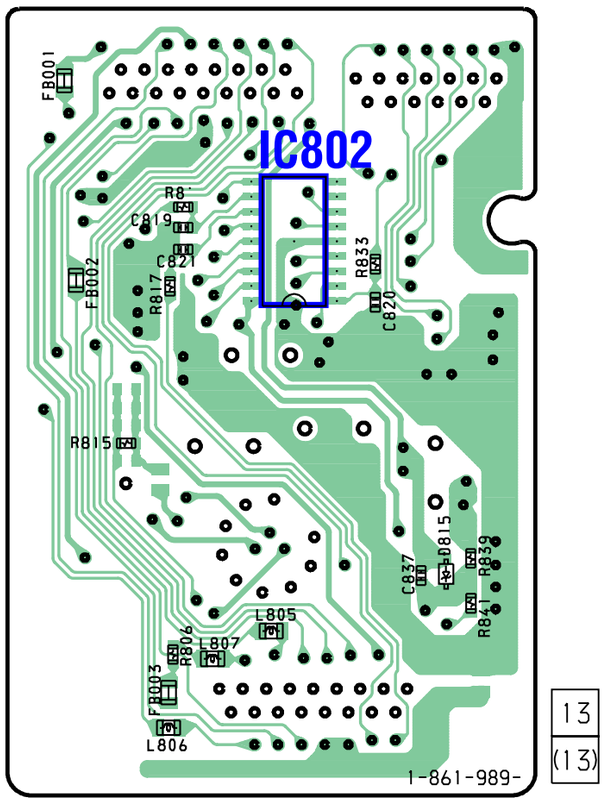
### 3-25. SCHEMATIC DIAGRAM — IO BOARD (2/2) —



### 3-26. PRINTED WIRING BOARD — DDCON BOARD —

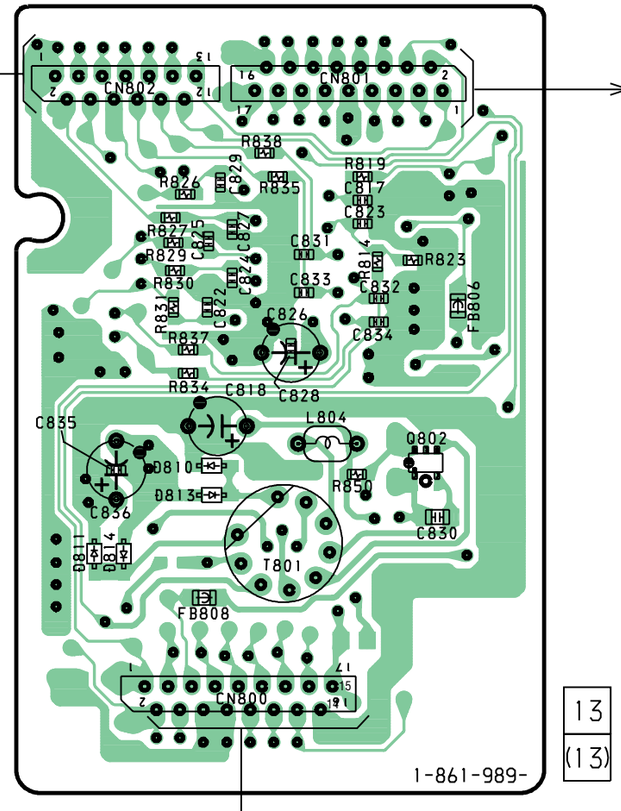
• See page 7 for Circuit Boards Location. :Uses unleaded solder.

【ÐÐCON BOARÐ】(SIÐE A)




13
(13)

【ÐÐCON BOARÐ】(SIÐE B)




13
(13)

P DISC KEY BOARD CN804 (Page 39)

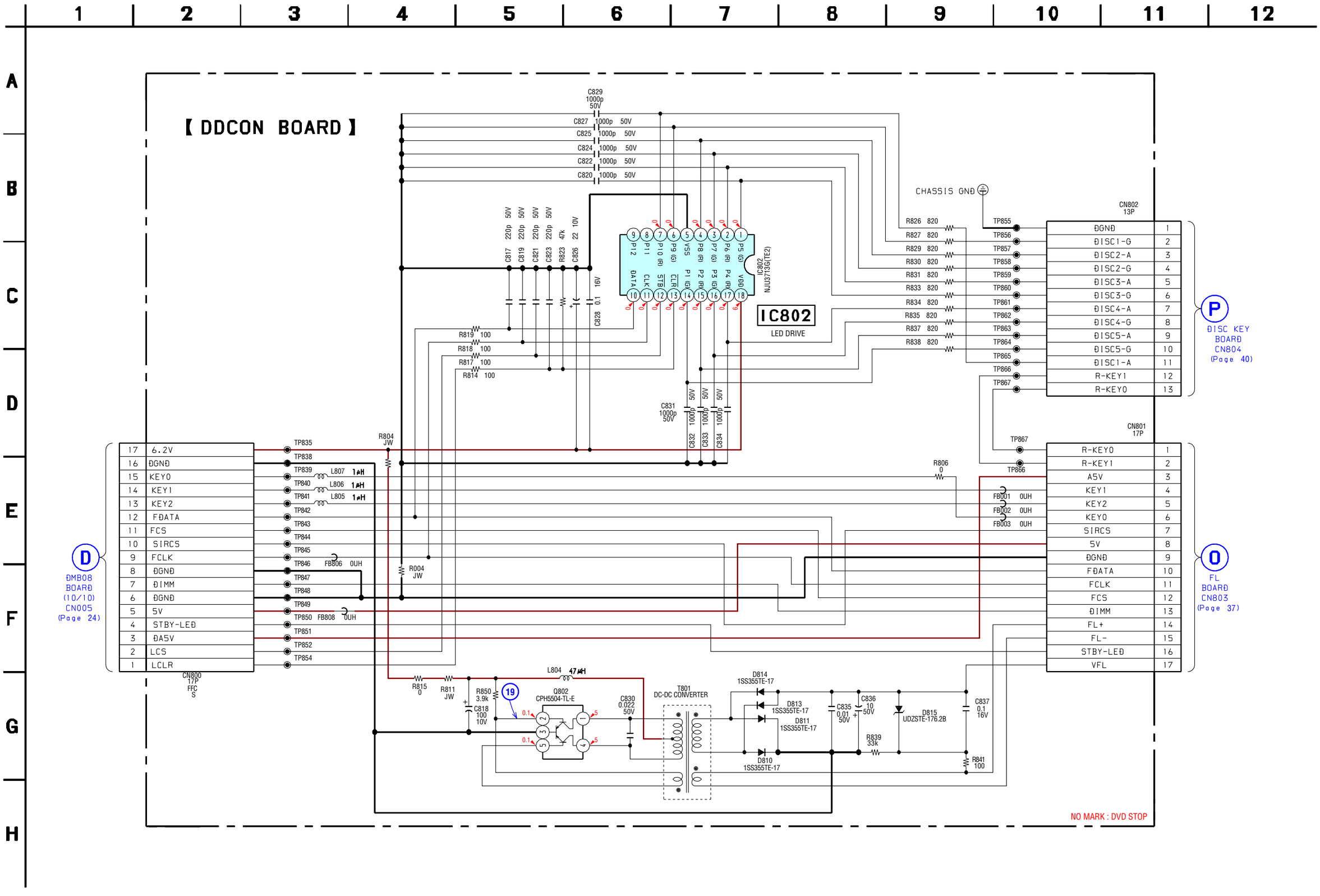
0 FL BOARD CN803 (Page 36)

D DMB08 BOARD CN005 (Page 13)

- **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D810 | C-5 |
| D811 | C-5 |
| D813 | C-5 |
| D814 | C-5 |
| D815 | C-3 |
| IC802 | A-2 |
| Q802 | C-6 |

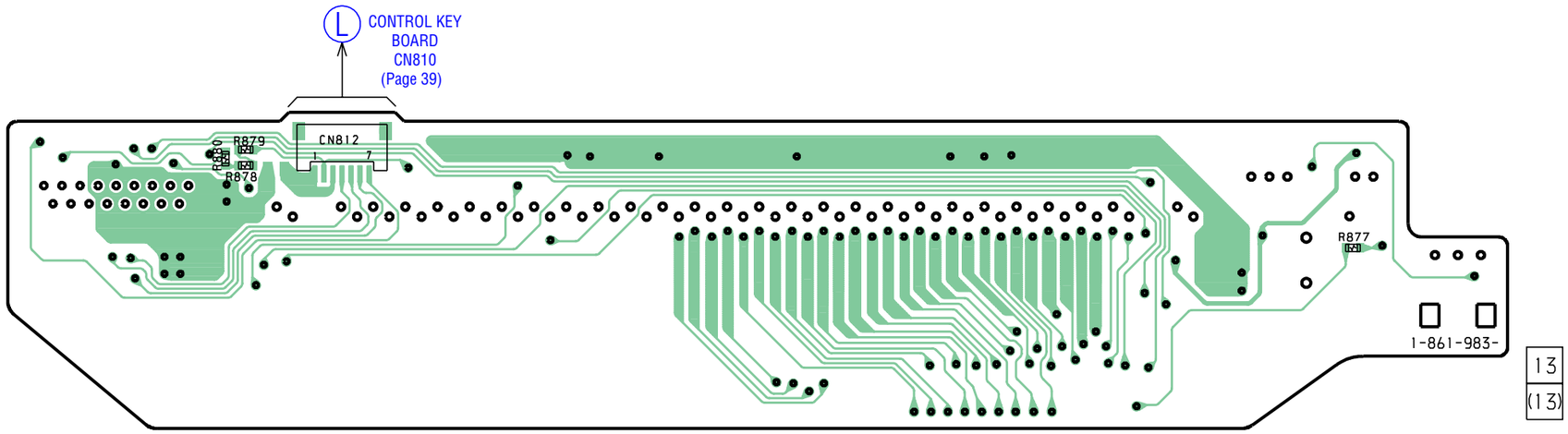
## 3-27. SCHEMATIC DIAGRAM — DDCON BOARD —



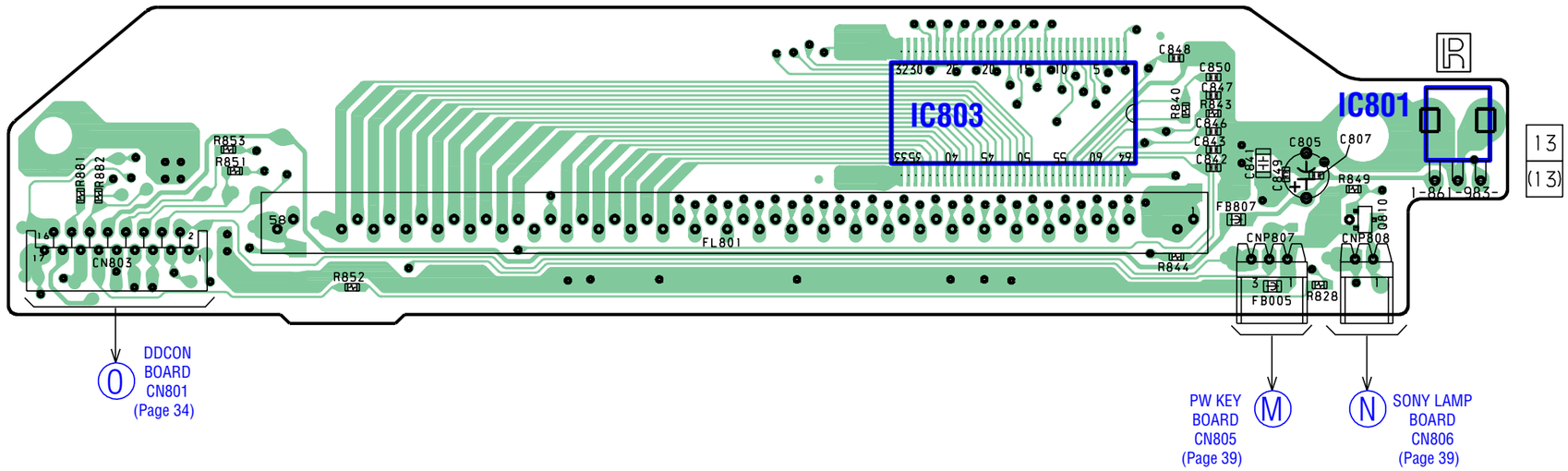
## 3-28. PRINTED WIRING BOARD — FL BOARD —

• See page 7 for Circuit Boards Location. :Uses unleaded solder.

【FL BOARD】(SIDE A)



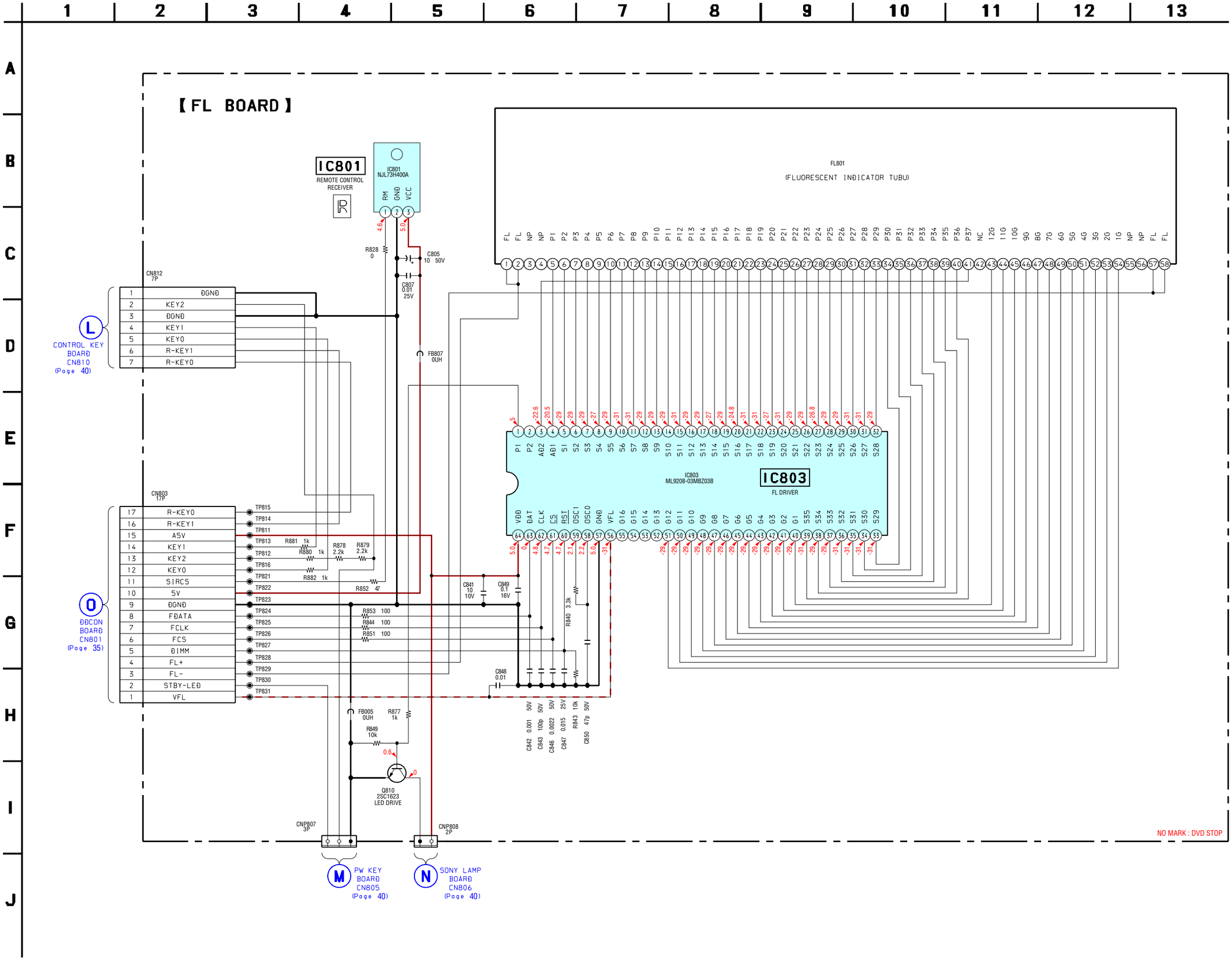

【FL BOARD】(SIDE B)




• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| IC801 | D-7 |
| IC803 | D-5 |
| Q810 | D-7 |

## 3-29. SCHEMATIC DIAGRAM — FL BOARD —

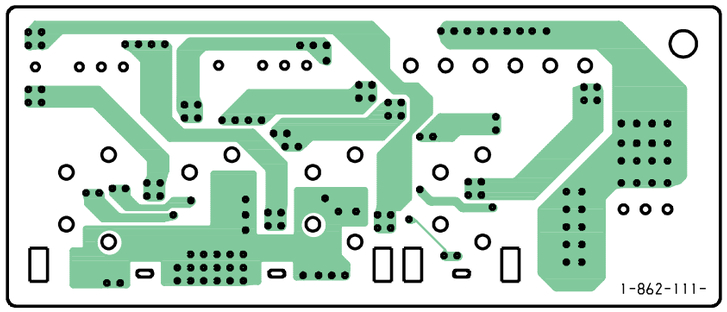


## 3-30. PRINTED WIRING BOARD — SPK BOARD —

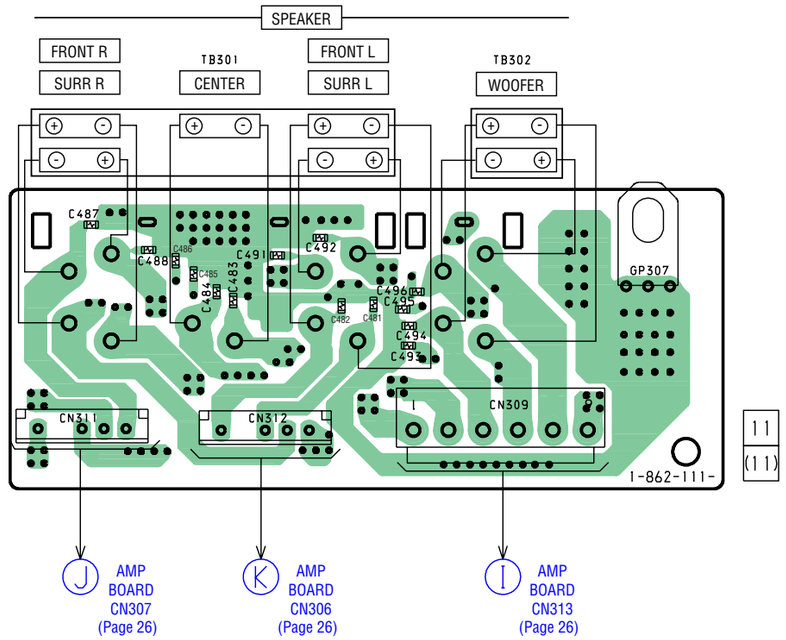
• See page 7 for Circuit Boards Location.

:Uses unleaded solder.

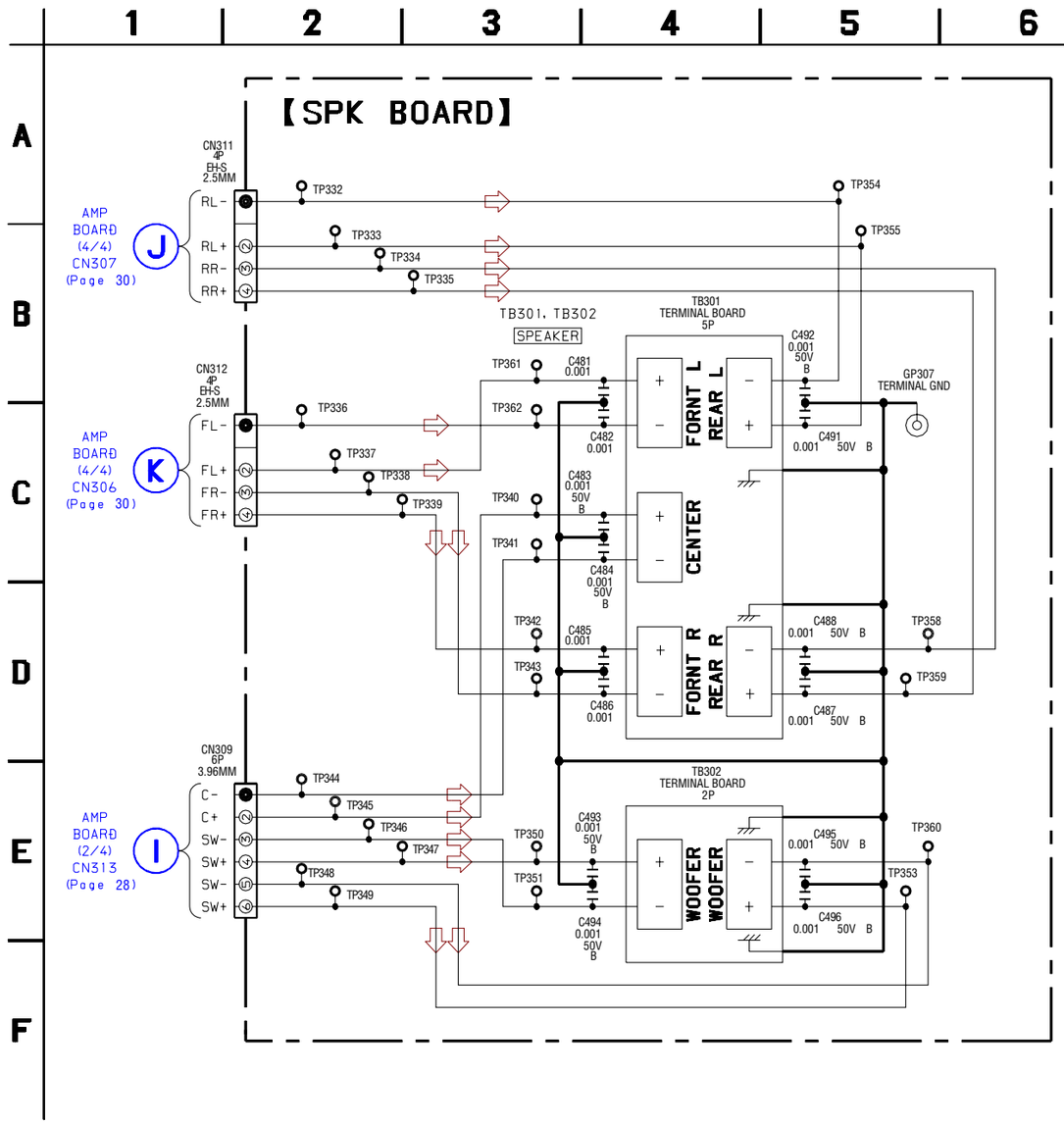
【SPK BOARD】(SIDE A)




【SPK BOARD】(SIDE B)




## 3-31. SCHEMATIC DIAGRAM — SPK BOARD —

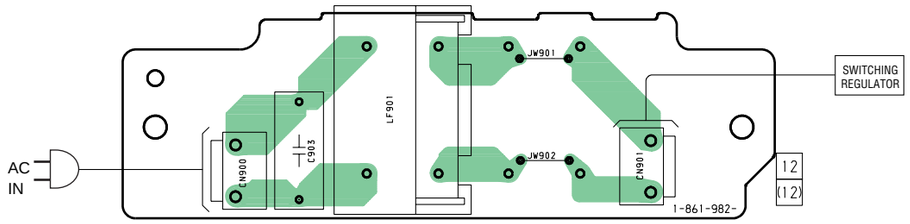


## 3-32. PRINTED WIRING BOARD — POWER/FRONT PANEL SECTION —

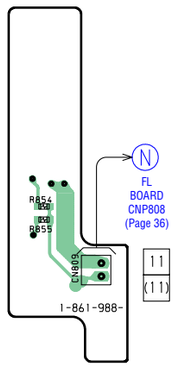
• See page 7 for Circuit Boards Location. :Uses unleaded solder.

☆ The TACTILE SWITCH (S800-818) on CONTROL KEY board, DISC KEY board and PW KEY board are depending on a suffix of each board. Please refer to SUPPLEMENT-3 of this manual at the time of replacement.

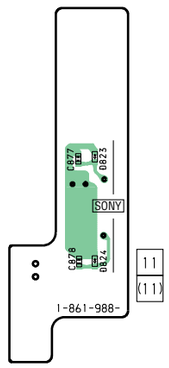
【LF BOARD】



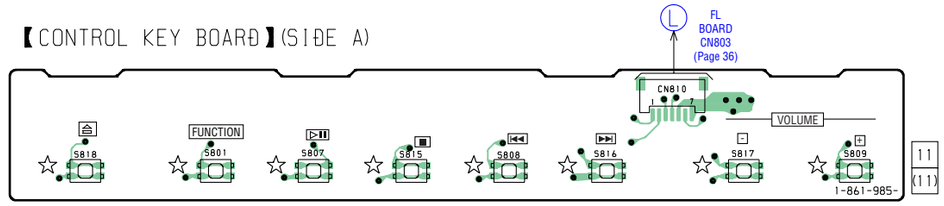

【SONY LAMP BOARD】(SIDE B)



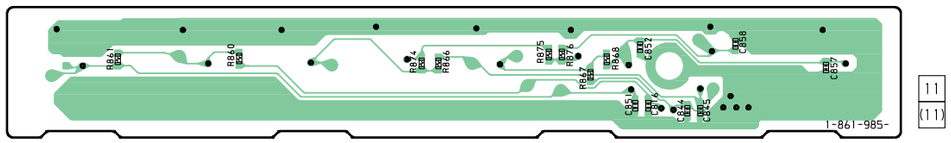

【SONY LAMP BOARD】(SIDE A)



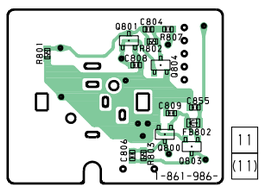

【CONTROL KEY BOARD】(SIDE A)



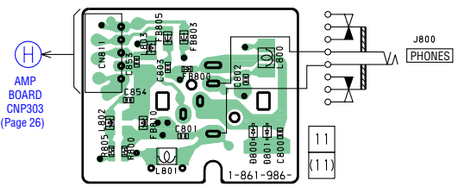

【CONTROL KEY BOARD】(SIDE B)



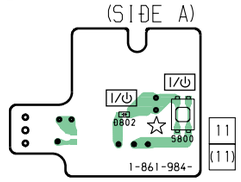

【HP BOARD】(SIDE A)



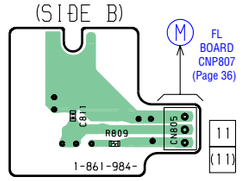

【HP BOARD】(SIDE B)



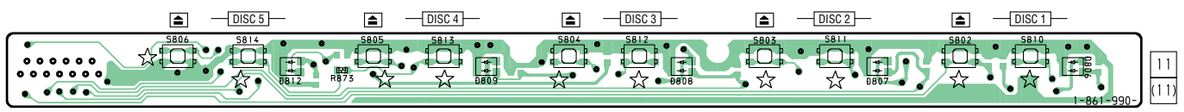

【PW KEY BOARD】(SIDE A)



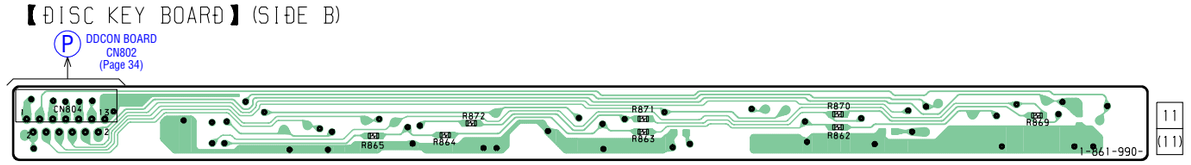

【PW KEY BOARD】(SIDE B)




【DISC KEY BOARD】(SIDE A)



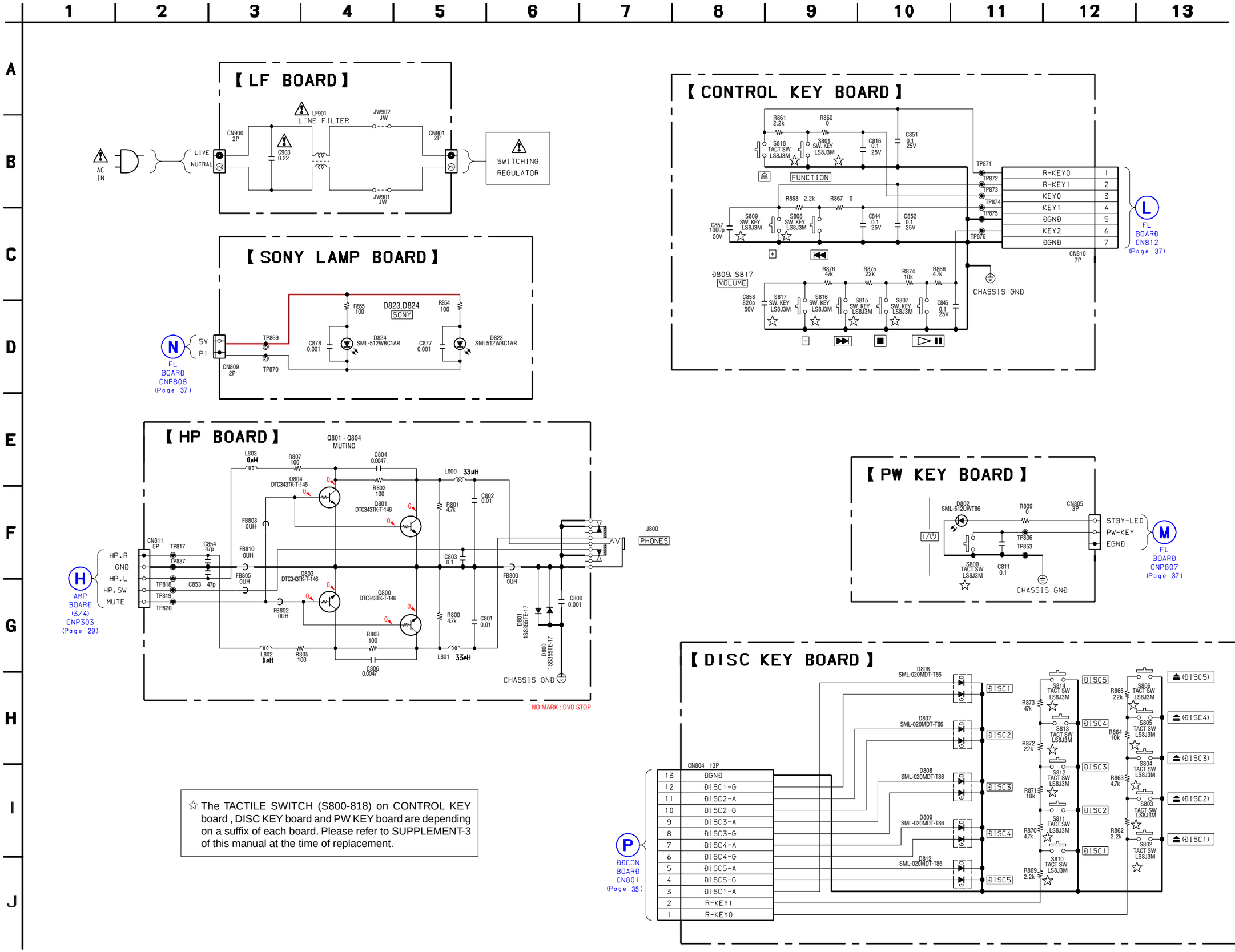

【DISC KEY BOARD】(SIDE B)




- **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D800 | G-5 |
| D801 | G-5 |
| D802 | G-9 |
| D806 | H-13 |
| D807 | H-11 |
| D808 | H-10 |
| D809 | H-9 |
| D812 | H-8 |
| D823 | D-5 |
| D824 | E-5 |
| | |
| Q800 | F-3 |
| Q801 | F-3 |
| Q803 | G-3 |
| Q804 | G-3 |

## 3-33. SCHEMATIC DIAGRAM — POWER/FRONT PANEL SECTION —




☆ The TACTILE SWITCH (S800-818) on CONTROL KEY board , DISC KEY board and PW KEY board are depending on a suffix of each board. Please refer to SUPPLEMENT-3 of this manual at the time of replacement.

# SECTION 4
# EXPLODED VIEWS

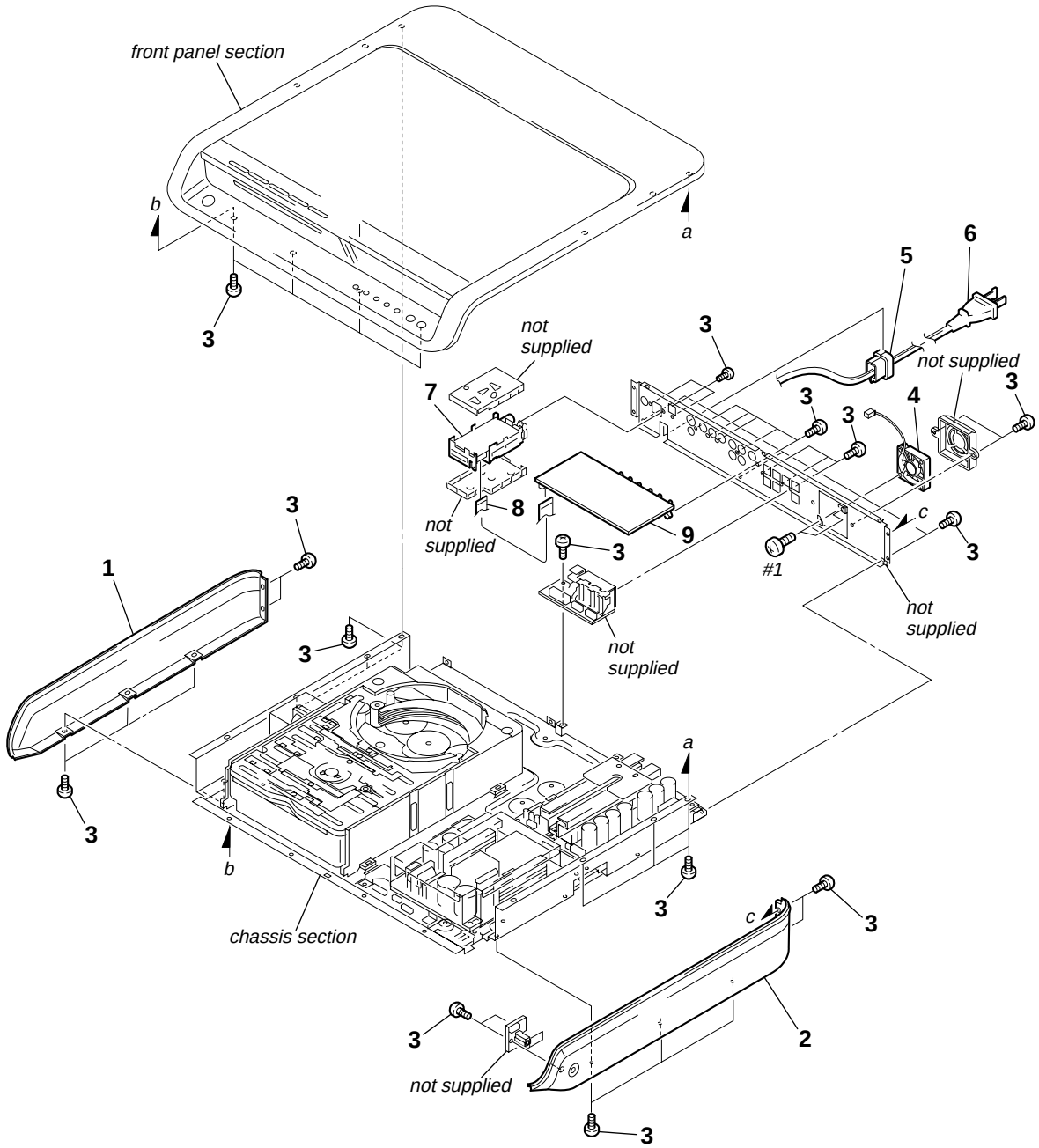
**NOTE:**

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

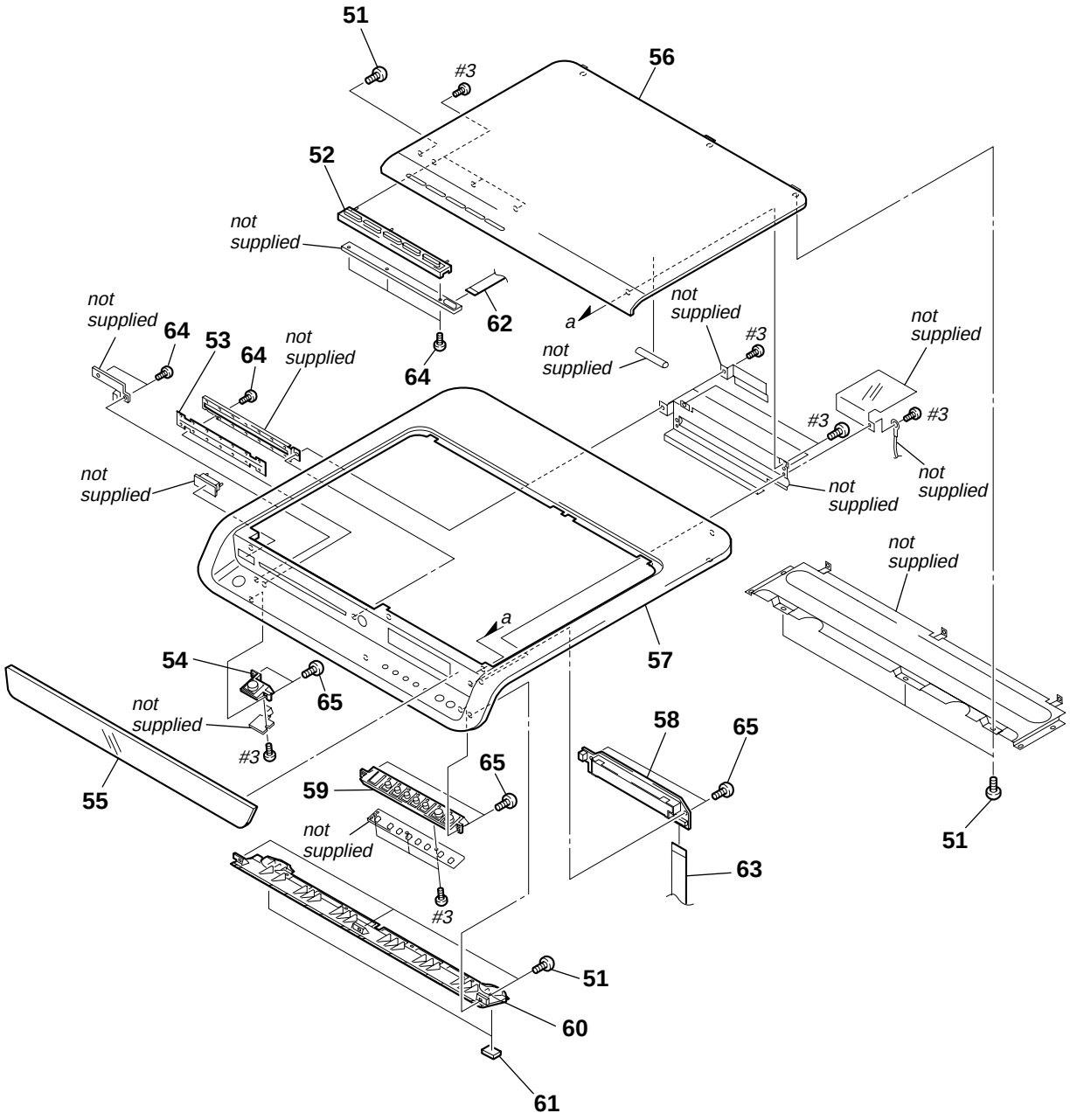
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

## 4-1. CASE SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | 4-253-911-01 | PANEL (L), SIDE | |
| 2 | 4-253-912-01 | PANEL (R), SIDE | |
| 3 | 3-077-331-01 | +BV3 (3-CR) | |
| 4 | 1-763-861-12 | FAN, DC | |
| 5 | 4-217-350-11 | STOPPER, CORD | |
| ⚠6 | 1-783-531-72 | CORD, POWER | |
| 7 | A-4750-572-A | TUNER UNIT | |
| 8 | 1-828-962-11 | WIRE (FLAT TYPE) (11 CORE) | |
| 9 | A-4751-753-A | IO BOARD, COMPLETE | |
| #1 | 7-685-881-09 | SCREW +BVTT4X8 (S) | |

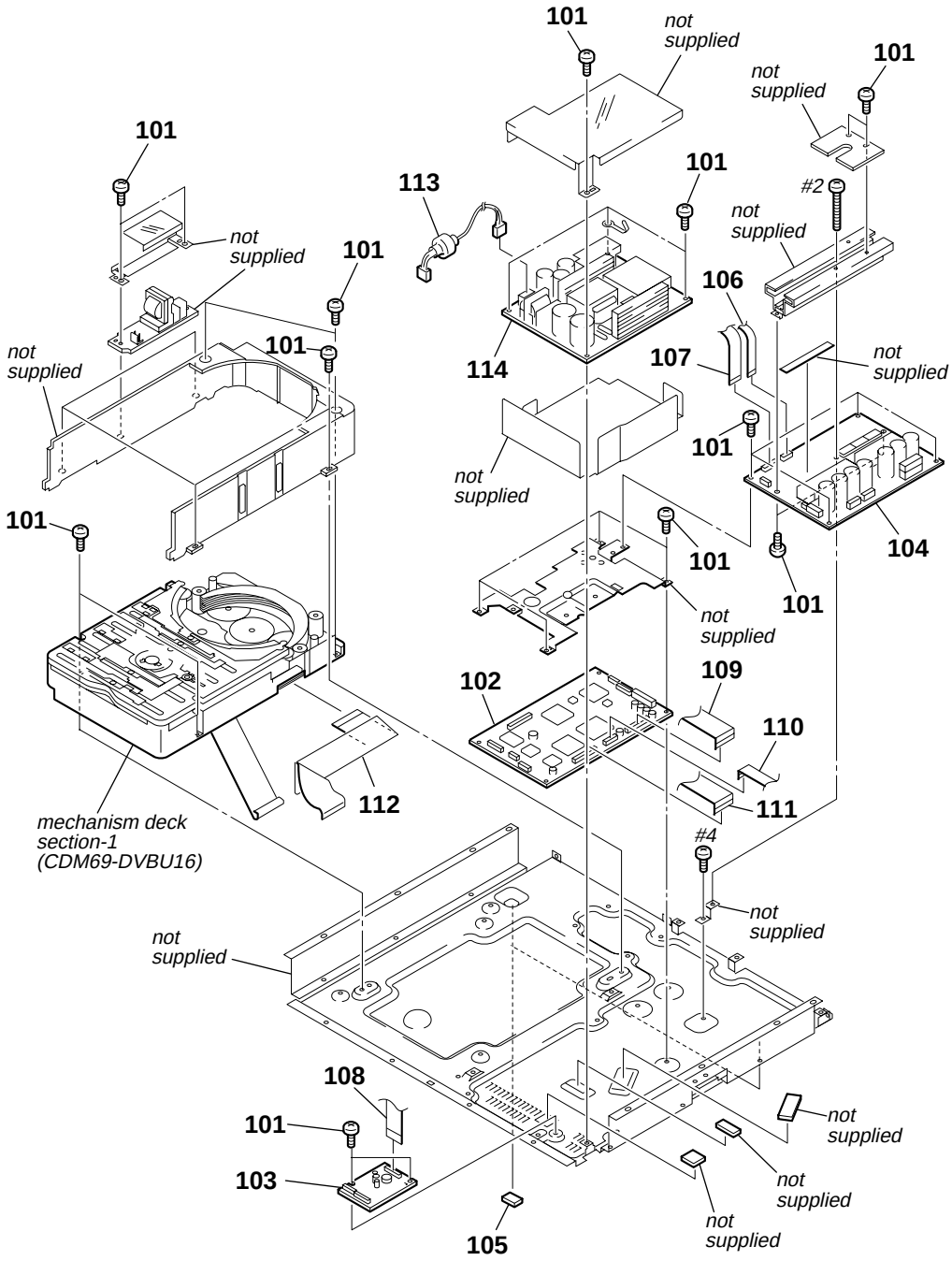
## 4-2. FRONT PANEL SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | 3-077-331-21 | +BV3 (3-CR) | |
| 52 | X-4956-316-1 | BUTTON SUB ASSY, DISC | |
| 53 | 4-253-902-01 | CUSHION, SLOT | |
| 54 | X-4956-308-1 | BUTTON (POWER) SUB ASSY | |
| 55 | X-4956-319-1 | WINDOW SUB ASSY | |
| 56 | 4-253-918-01 | PANEL (AL), FRONT | |
| 57 | 4-253-910-01 | PANEL (ML), FRONT (FR1) | |
| 57 | 4-253-910-11 | PANEL (ML), FRONT (FR8) | |
| 57 | 4-253-910-21 | PANEL (ML), FRONT (FR9) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 58 | A-4751-757-A | FL BOARD, COMPLETE | |
| 59 | X-4956-315-1 | BUTTON SUB ASSY, PLAY | |
| 60 | 4-253-909-01 | PANEL, BOTTOM | |
| 61 | 4-232-478-31 | FOOT | |
| 62 | 1-829-320-11 | FLEXIBLE FLAT CABLE (13 CORE) | |
| 63 | 1-829-321-11 | FLEXIBLE FLAT CABLE (17 CORE) | |
| 64 | 4-931-757-31 | SCREW (DIA.2.6X8) (IT3B), TAPPING | |
| 65 | 7-685-133-19 | SCREW +P2.6X6, TYPE 2 | |
| #3 | 7-685-133-19 | SCREW +P2.6X6 TYPE2 | |

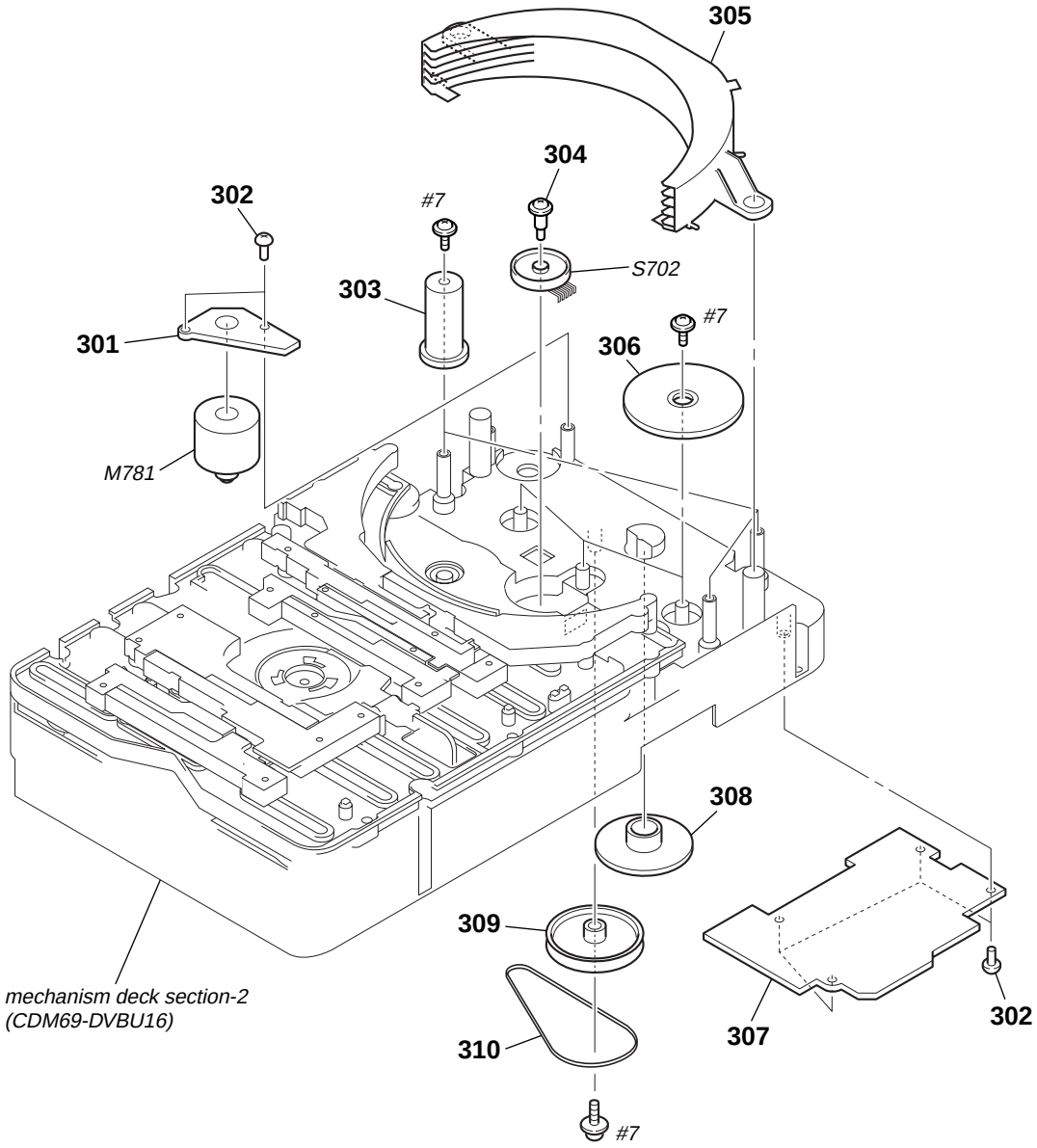
## 4-3. CHASSIS SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 101 | 3-077-331-01 | +BV3 (3-CR) | |
| 102 | A-4751-785-A | DMB08 BOARD, COMPLETE (FR1) | |
| 102 | A-4753-404-A | DMB08 BOARD, COMPLETE (FR8) | |
| 102 | A-4753-472-A | DMB08 BOARD, COMPLETE (FR9) | |
| 103 | A-4751-769-A | DDCON BOARD, COMPLETE | |
| 104 | A-4751-783-A | AMP BOARD, COMPLETE (FR1) | |
| 104 | A-4753-468-A | AMP BOARD, COMPLETE (FR8) | |
| 104 | A-4753-478-A | AMP BOARD, COMPLETE (FR9) | |
| 105 | 4-232-478-31 | FOOT | |
| 106 | 1-829-322-11 | FLEXIBLE FLAT CABLE (9 CORE) | |
| 107 | 1-829-319-11 | FLEXIBLE FLAT CABLE (17 CORE) | |
| 108 | 1-828-349-11 | WIRE (FLAT TYPE) (17 CORE) | |
| 109 | 1-829-323-11 | FLEXIBLE FLAT CABLE (29 CORE) | |
| 110 | 1-829-326-11 | FLEXIBLE FLAT CABLE (15 CORE) | |
| 111 | 1-829-325-11 | FLEXIBLE FLAT CABLE (29 CORE) | |
| 112 | 1-829-324-11 | FLEXIBLE FLAT CABLE (28 CORE) | |
| 113 | 1-500-657-11 | CORE, FERRIET | |
| ⚠114 | 1-468-838-11 | REGULATOR, SWITCHING | |
| #2 | 7-685-650-79 | SCREW +BVTP3X16 TYPE2 IT-3 | |
| #4 | 7-621-775-10 | SCREW +B2.6X4 | |

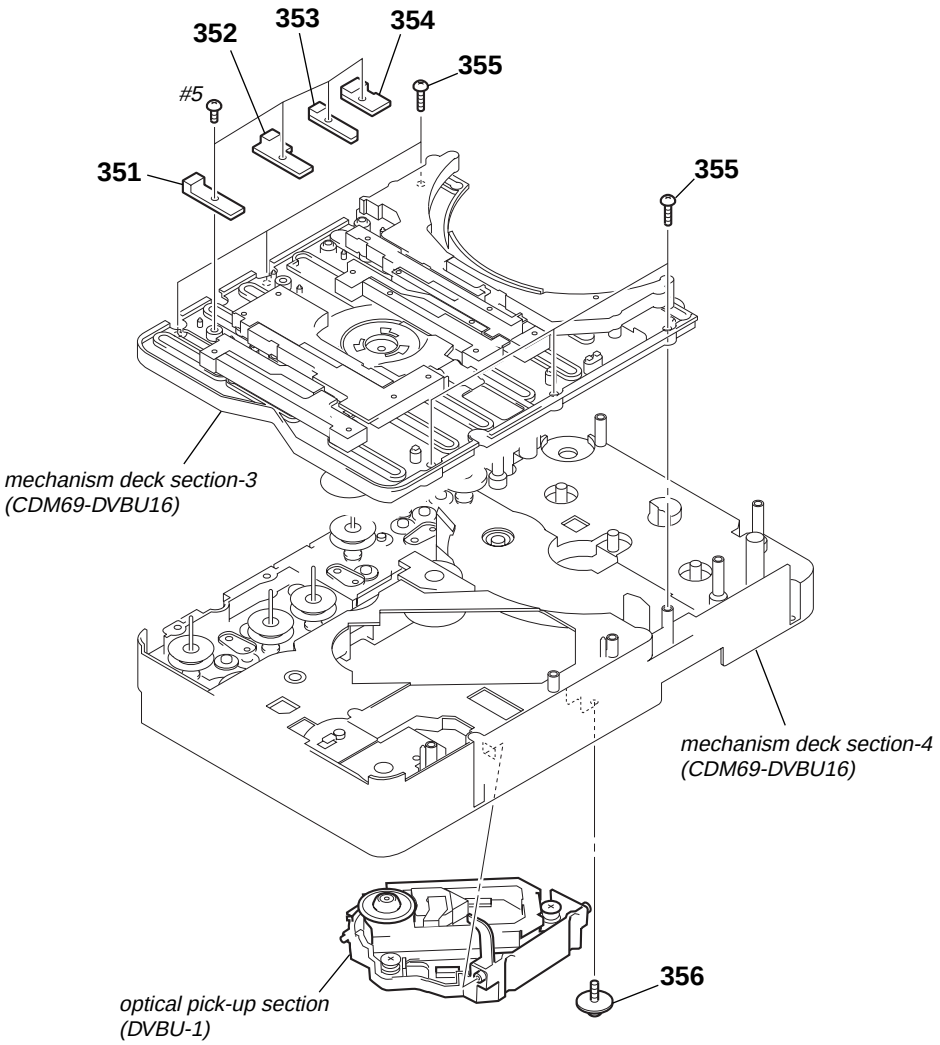
| | |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une pièce portant le numéro spécifié. |

## 4-4. MECHANISM DECK SECTION-1 (CDM69-DVBU16)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 301 | 1-685-006-11 | STOCKER MOTOR BOARD | |
| 302 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| 303 | 4-239-690-01 | CAM (STOCKER U/D) | |
| 304 | 4-239-618-01 | SCREW (+PWH, 2X6), STEP TAPPING | |
| 305 | X-4954-628-1 | STOCKER ASSY | |
| 306 | 4-239-687-01 | GEAR (STOCKER COMMUNICATION) | |
| 307 | A-4728-700-A | RELAY BOARD, COMPLETE | |
| 308 | 4-239-689-01 | GEAR (STOCKER DECELERATION) | |
| 309 | 4-239-698-01 | PULLEY (STOCKER) | |
| 310 | 4-240-035-01 | BELT (STOCKER) | |
| M781 | A-4735-953-A | MOTOR (STOCKER) ASSY (STOCKER) | |
| S702 | 1-477-299-11 | ENCODER, ROTARY (STOCKER POSITION) | |
| #7 | 7-685-902-21 | SCREW +PTPWH 2.6X8 (TYPE2) | |

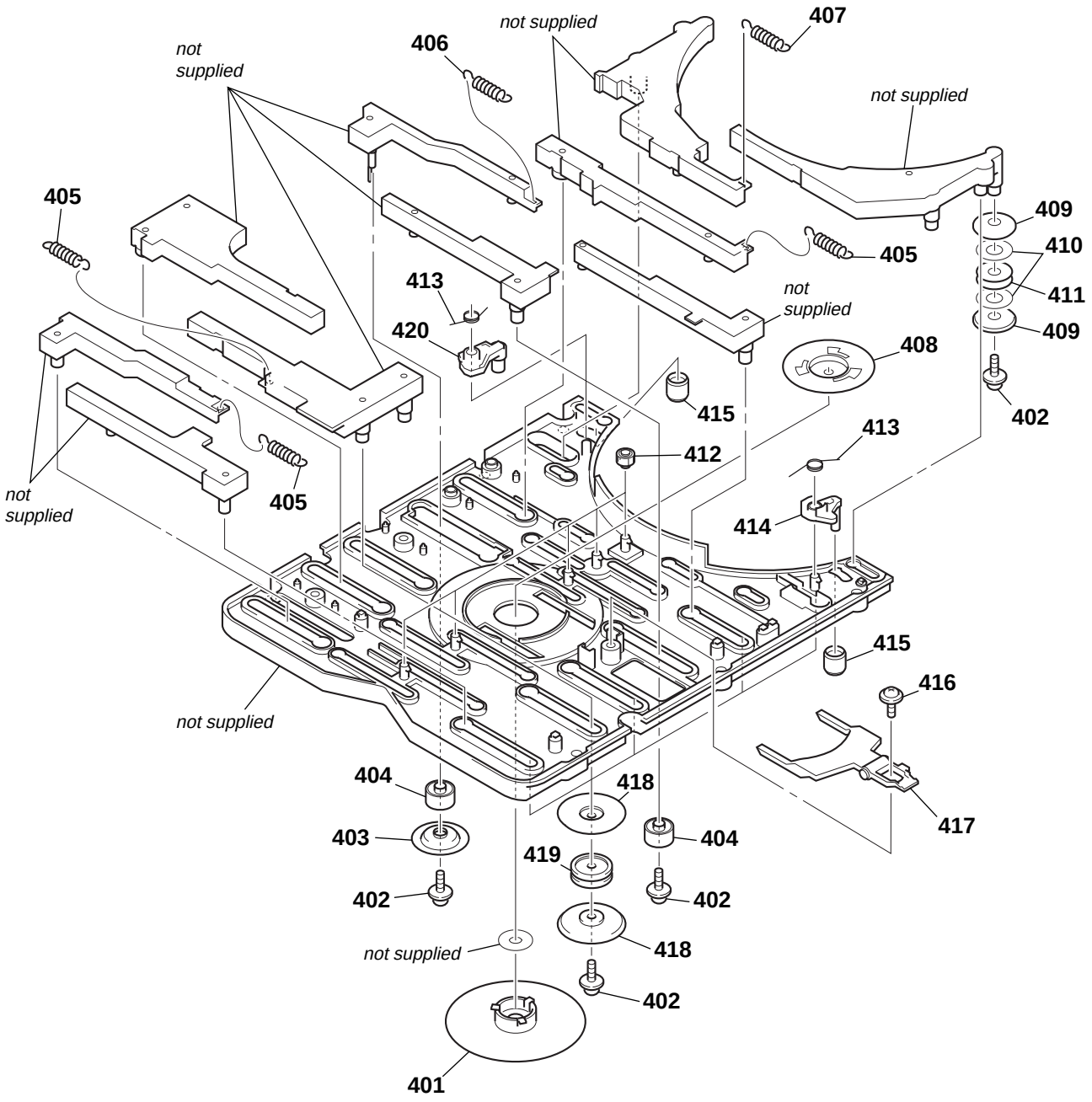
## 4-5. MECHANISM DECK SECTION-2 (CDM69-DVBU16)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 351 | 1-685-008-11 | SW (1) BOARD | |
| 352 | 1-685-009-11 | SW (2) BOARD | |
| 353 | 1-685-010-11 | SW (3) BOARD | |
| 354 | 1-685-011-11 | SW (4) BOARD | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 355 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| 356 | 4-985-672-01 | SCREW (+PTPWHM 2.6), FLOATING | |
| #5 | 7-685-533-14 | SCREW +BTP 2.6X6 TYPE2 N-S | |

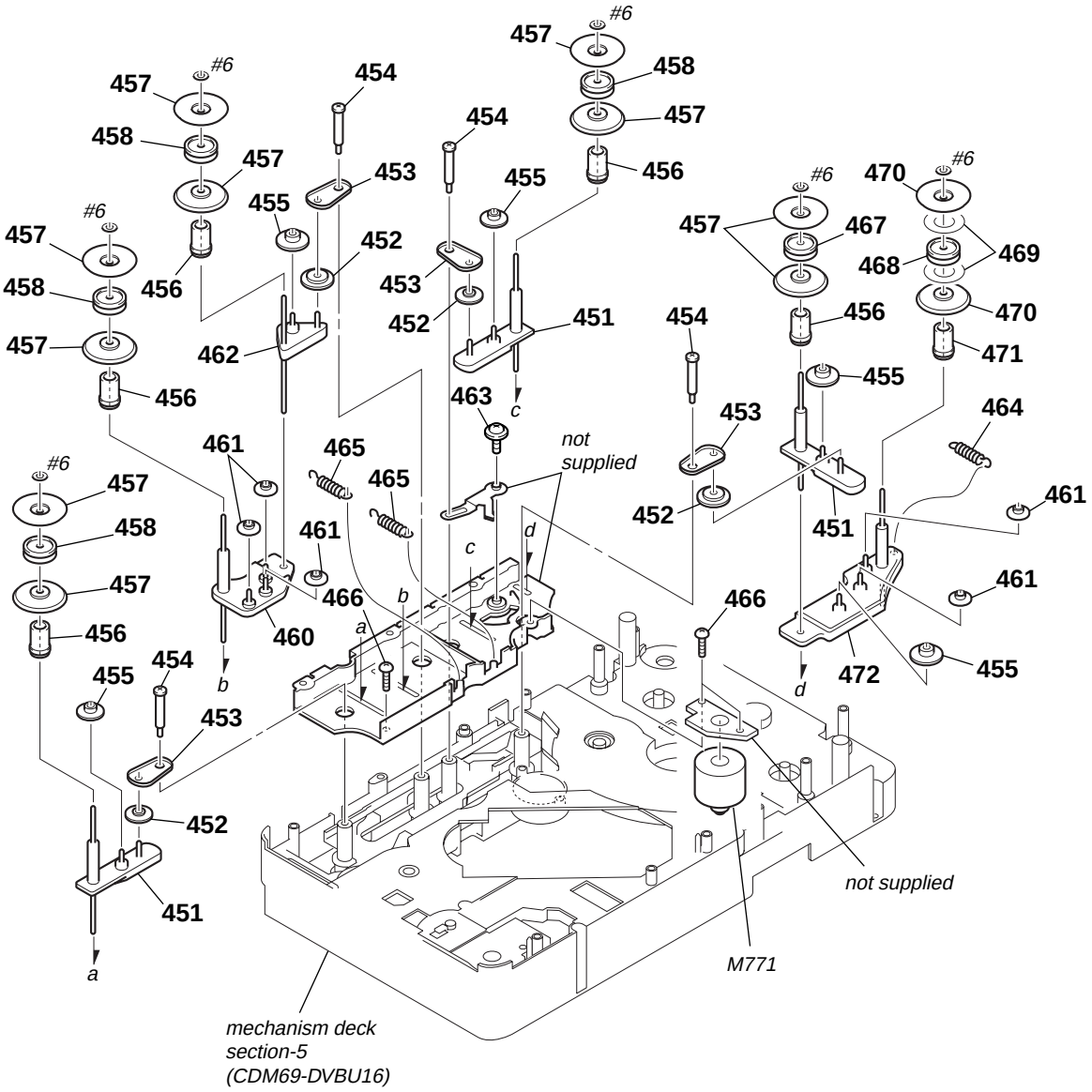
## 4-6. MECHANISM DECK SECTION-3 (CDM69-DVBU16)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 401 | 4-240-038-01 | PULLEY (A), CHUCKING | |
| 402 | 4-992-069-01 | SCREW (+PTPWH) (M2) (DIA. 7) | |
| 403 | 4-239-648-01 | PARASOL (ROLLER) | |
| 404 | 4-239-646-01 | ROLLER (ROLLER) | |
| 405 | 4-239-641-01 | SPRING (1.2), TENSION | |
| 406 | 4-239-642-01 | SPRING (3), TENSION COIL | |
| 407 | 4-239-679-01 | SPRING (5), TENSION COIL | |
| 408 | 4-240-037-01 | PULLEY (B), CHUCKING | |
| 409 | 4-239-649-01 | PARASOL (STOCKER) | |
| 410 | 4-241-209-01 | SHEET, ADHESIVE | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 411 | 4-239-651-01 | ROLLER (STOCKER), RUBBER | |
| 412 | 4-239-640-01 | PINION (SLIDER) | |
| 413 | 4-240-040-01 | SPRING (DISC STOPPER), TORSION | |
| 414 | 4-240-039-01 | LEVER (DISC STOPPER) | |
| 415 | 4-239-702-01 | ROLLER (DISC STOPPER) | |
| 416 | 4-985-672-01 | SCREW (+PTPWHM 2.6), FLOATING | |
| 417 | 4-239-650-01 | LEVER (LIFTER) | |
| 418 | 4-239-647-01 | PARASOL (MAIN) | |
| 419 | 4-239-645-01 | ROLLER, RUBBER | |
| 420 | 4-241-599-01 | LEVER (SUPPORT) | |

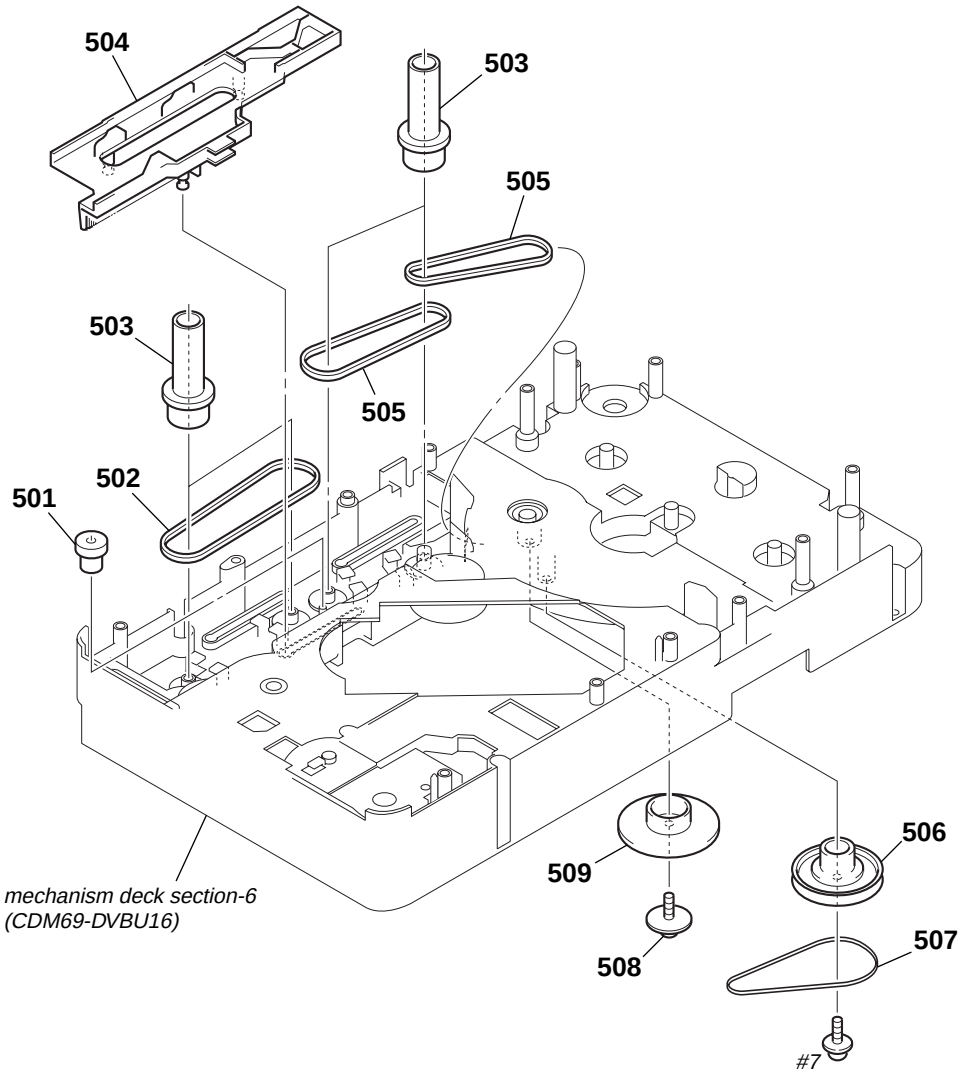
## 4-7. MECHANISM DECK SECTION-4 (CDM69-DVBU16)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 451 | X-4954-626-1 | LEVER (ROLLER) ASSY | |
| 452 | 4-239-666-01 | GEAR | |
| 453 | 4-239-668-01 | LEVER (CENTER) | |
| 454 | 4-239-652-01 | SCREW (ROLLER), STEP | |
| 455 | 4-239-669-01 | GEAR (ROLLER COMMUNICATION) | |
| 456 | 4-239-667-01 | GEAR (ROLLER CENTER) | |
| 457 | 4-239-647-01 | PARASOL (MAIN) | |
| 458 | 4-239-645-01 | ROLLER, RUBBER | |
| 460 | X-4954-622-1 | BASE (SLIDER 2) ASSY | |
| 461 | 4-239-670-01 | GEAR (ROLLER 5 COMMUNICATION) | |
| 462 | X-4954-624-A | LEVER (SLIDER 4) ASSY | |
| 463 | 4-992-069-01 | SCREW (+PTPWH) (M2) (DIA. 7) | |

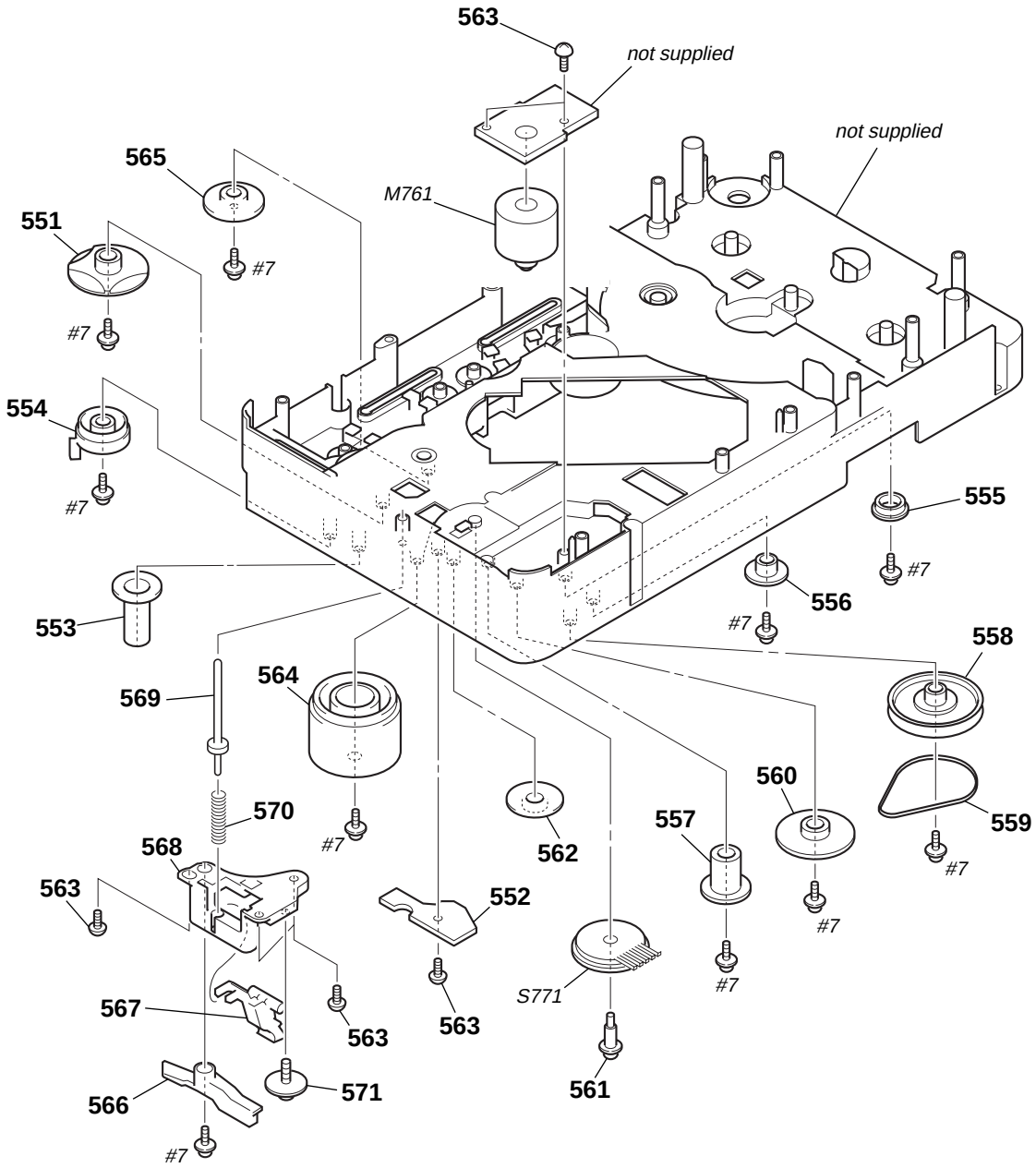
| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 464 | 4-240-981-01 | SPRING (BASE SLIDER 5),TENSION | |
| 465 | 4-240-041-01 | SPRING (SLIDER 2), TENSION | |
| 466 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| 467 | 4-241-467-01 | ROLLER (S), RUBBER | |
| 468 | 4-239-651-01 | ROLLER (STOCKER) RUBBER | |
| 469 | 4-241-209-01 | SHEET, ADHESIVE | |
| 470 | 4-239-649-01 | PARASOL (STOCKER) | |
| 471 | 4-239-671-01 | GEAR (ROLLER 5 CENTER) | |
| 472 | X-4954-627-1 | BASE (SLIDER 5) ASSY | |
| M771 | A-4735-953-A | MOTOR (STOCKER) ASSY (ROLLER) | |
| #6 | 7-623-921-01 | WASHER 1.7, NYRON | |

## 4-8. MECHANISM DECK SECTION-5 (CDM69-DVBU16)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 501 | 4-240-020-01 | GEAR (TIMING) | |
| 502 | 4-239-708-01 | BELT (FRONT), TIMING | |
| 503 | 4-239-697-01 | GEAR (CENTER) | |
| 504 | X-4954-629-1 | SLIDER (MODE CAM) ASSY | |
| 505 | 4-239-706-01 | BELT (REAR), TIMING | |
| 506 | 4-239-699-01 | PULLEY | |
| 507 | 4-239-681-01 | BELT (ROLLER) | |
| 508 | 4-227-899-01 | SCREW (DIA. 12), FROATING | |
| 509 | 4-239-686-01 | GEAR (ROLLER DECELERATION) | |
| #7 | 7-685-902-21 | SCREW +PTPWH 2.6X8 (TYPE2) | |

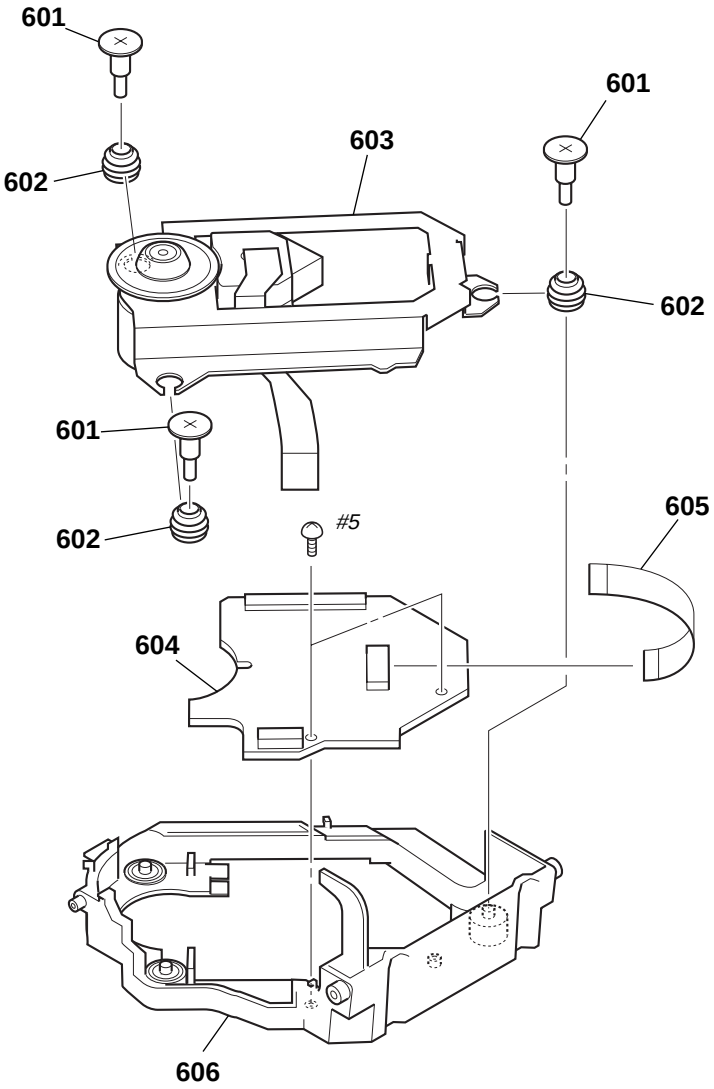
## 4-9. MECHANISM DECK SECTION-6 (CDM69-DVBU16)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 551 | 4-239-693-01 | CAM (GEAR) | |
| 552 | 1-685-004-11 | SENSOR BOARD | |
| 553 | 4-239-696-01 | GEAR (EJECT LOCK) | |
| 554 | 4-239-695-02 | CAM (EJECT LOCK) | |
| 555 | 4-240-018-01 | GEAR (MODE 4) | |
| 556 | 4-240-019-01 | GEAR (MODE 5) | |
| 557 | 4-239-700-01 | GEAR (MODE 2) | |
| 558 | 4-239-683-01 | PULLEY (MODE DECELERATION) | |
| 559 | 4-239-682-01 | BELT (MODE) | |
| 560 | 4-239-688-01 | GEAR (MODE 3) | |
| 561 | 4-239-618-01 | SCREW (+PWH, 2X6), STEP TAPPING | |
| 562 | 4-239-684-01 | GEAR (MODE 1) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 563 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| 564 | 4-239-692-01 | CAM (BU U/D) | |
| 565 | 4-239-694-01 | GEAR (MODE CAM) | |
| 566 | 4-241-731-01 | SHUTTER (A), LEVER | |
| 567 | 4-241-732-01 | SHUTTER (B), LEVER | |
| 568 | 4-241-733-01 | BASE (SHUTTER) | |
| 569 | 4-241-734-01 | SHAFT (SHUTTER) | |
| 570 | 4-241-735-01 | SPRING (SHUTTER), COMPRESSION | |
| 571 | 4-227-899-01 | SCREW (DIA.12), FLOATING | |
| M761 | A-4735-953-A | MOTOR (STOCKER) ASSY (MODE) | |
| S771 | 1-477-300-11 | ENCODER, ROTARY (MODE) | |
| #7 | 7-685-902-21 | SCREW +PTPWH 2.6X8 (TYPE2) | |

## 4-10. OPTICAL PICK-UP SECTION (DBU-1)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 601 | 4-981-923-01 | SCREW (M), STEP | |
| 602 | 3-053-847-31 | INSULATOR | |
| ⚠603 | 1-477-263-11 | OPTICAL PICK-UP (DBU-1) | |
| 604 | A-4728-690-A | RF BOARD, COMPLETE | |
| 605 | 1-685-250-11 | FLEXIBLE BOARD | |
| 606 | 4-239-703-01 | HOLDER (DBU1) | |
| #5 | 7-685-533-14 | SCREW +BTP 2.6X6 TYPE2 N-S | |

| | |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une pièce portant le numéro spécifié. |

# SECTION 5
# ELECTRICAL PARTS LIST

**AMP**

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | A-4751-783-A | AMP BOARD, COMPLETE (FR1) | | | |
| | A-4753-468-A | AMP BOARD, COMPLETE (FR8) | | | |
| | A-4753-478-A | AMP BOARD, COMPLETE (FR9) | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C101 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C102 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C103 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C104 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C105 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C106 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C107 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C111 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C112 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C113 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C114 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C115 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C116 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C117 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C131 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C132 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C133 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C134 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C135 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C136 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C137 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C138 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C141 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C142 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C143 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C144 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C145 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C146 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C147 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C148 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C149 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C151 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C152 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C153 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C154 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C155 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C156 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C157 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C158 | 1-126-947-11 | ELECT | 47uF | 20% | 10V |
| C160 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C161 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C162 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C163 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C164 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C165 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C166 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C167 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C168 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C171 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C172 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C173 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C174 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C175 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C176 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C177 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C178 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C180 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C181 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C182 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C183 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C184 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C185 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C186 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C187 | 1-115-185-11 | CERAMIC CHIP | 0.033uF | 10% | 50V |
| C188 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C189 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C190 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C191 | 1-107-898-11 | ELECT | 2200uF | 20% | 35V |
| C192 | 1-107-898-11 | ELECT | 2200uF | 20% | 35V |
| C193 | 1-107-898-11 | ELECT | 2200uF | 20% | 35V |
| C194 | 1-107-898-11 | ELECT | 2200uF | 20% | 35V |
| C195 | 1-107-898-11 | ELECT | 2200uF | 20% | 35V |
| C196 | 1-107-898-11 | ELECT | 2200uF | 20% | 35V |
| C197 | 1-107-898-11 | ELECT | 2200uF | 20% | 35V |
| C198 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C199 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C200 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C201 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C202 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C203 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C204 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |

## AMP

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C205 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C206 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C207 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C208 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C209 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C210 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C211 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C212 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C213 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C214 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C215 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C216 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C217 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C218 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C221 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C222 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C223 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C224 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C225 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C226 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C227 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C248 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C251 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C252 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C253 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C254 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C255 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C256 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C257 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C261 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C262 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C263 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C264 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C265 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C266 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C267 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C271 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C272 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C273 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C274 | 1-125-898-91 | CERAMIC CHIP | 0.22uF | 10% | 50V |
| C275 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C276 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C277 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C278 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C281 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C282 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C283 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C284 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C285 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C286 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C287 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C288 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C289 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C290 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C291 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C292 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C293 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C294 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C301 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C302 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C303 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C304 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C305 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C306 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C308 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C309 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C310 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C311 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C312 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C313 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C314 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C315 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C316 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C317 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C318 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C319 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C320 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C321 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C322 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C323 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C324 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C325 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C326 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C327 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C328 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C329 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C330 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C331 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C332 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C333 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C334 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C335 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C336 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C337 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C350 | 1-115-339-11 | CERAMIC CHIP | 0.1uF | 10% | 50V |
| C351 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C352 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C353 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C354 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C355 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C356 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C357 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C358 | 1-126-925-91 | ELECT | 470uF | 20% | 10V |
| C359 | 1-126-925-91 | ELECT | 470uF | 20% | 10V |
| C360 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C361 | 1-126-947-11 | ELECT | 47uF | 20% | 25V |
| C362 | 1-104-658-91 | ELECT | 100uF | 20% | 10V |
| C363 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C366 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C367 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C368 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C370 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C371 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C372 | 1-126-960-11 | ELECT | 1uF | 20% | 50V |

**AMP**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C374 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C375 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C377 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C380 | 1-126-923-91 | ELECT | 220uF | 20% | 10V |
| C381 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C382 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C383 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C384 | 1-162-910-11 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C385 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C391 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C392 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C393 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C394 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C395 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C396 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C397 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C402 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C403 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C404 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C405 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C406 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| | | < CONNECTOR > | | | |
| CN300 | 1-564-704-11 | PIN, CONNECTOR (SMALL TYPE) 2P | | | |
| CN301 | 1-779-285-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 17P | | | |
| CN302 | 1-779-277-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 9P | | | |
| CN306 | 1-691-766-21 | PLUG (MICRO CONNECTOR) 4P | | | |
| CN307 | 1-691-766-11 | PLUG (MICRO CONNECTOR) 4P | | | |
| * CN313 | 1-564-243-11 | PIN, CONNECTOR (3.96mm PITCH) 6P | | | |
| | | < DIODE > | | | |
| D101 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D102 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D103 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D104 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D105 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D106 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D107 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D201 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D202 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D203 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D204 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D205 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D206 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D207 | 6-500-260-01 | DIODE P6SMB39AT3 | | | |
| D208 | 8-719-421-15 | DIODE MA8027-H-TX | | | |
| D303 | 8-719-988-61 | DIODE 1SS355TE-17 | | | |
| D304 | 8-719-988-61 | DIODE 1SS355TE-17 | | | |
| | | < FERRITE BEAD > | | | |
| FB301 | 1-469-760-21 | FERRITE, EMI (SMD)(2012) | | | |
| | | < IC > | | | |
| IC101 | 6-704-802-01 | IC CXD9774M | | | |
| IC102 | 6-704-802-01 | IC CXD9774M | | | |
| IC103 | 6-704-802-01 | IC CXD9774M | | | |
| IC104 | 6-704-802-01 | IC CXD9774M | | | |
| IC105 | 6-704-802-01 | IC CXD9774M | | | |
| IC106 | 6-704-802-01 | IC CXD9774M | | | |
| IC107 | 6-704-802-01 | IC CXD9774M | | | |
| IC108 | 6-705-979-01 | IC CXD9788AR | | | |
| IC109 | 6-705-979-01 | IC CXD9788AR | | | |
| IC110 | 6-705-979-01 | IC CXD9788AR | | | |
| IC301 | 6-705-720-01 | IC RC4580IDR | | | |
| IC303 | 6-702-300-01 | IC TK11118CSCL-G | | | |
| IC305 | 6-701-189-01 | IC MC74VHC1GU04DFT1 | | | |
| | | < COIL > | | | |
| L121 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L122 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L123 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L124 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L125 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L126 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L127 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L131 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L132 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L133 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L134 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L135 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L136 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L137 | 1-456-680-11 | INDUCTOR | 10uH | | |
| L302 | 1-412-939-11 | INDUCTOR | 1uH | | |
| | | < TRANSISTOR > | | | |
| Q101 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q102 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q103 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q104 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q105 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q106 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q107 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q108 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q109 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q110 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q111 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q112 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q113 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q114 | 8-729-602-36 | TRANSISTOR | 2SA1602TP-1EF | | |
| Q301 | 8-729-034-51 | TRANSISTOR | KTC3875 | | |
| Q303 | 8-729-801-84 | TRANSISTOR | 2SB1013-TP-34 | | |
| Q304 | 8-729-038-68 | TRANSISTOR | KRC103S | | |
| | | < RESISTOR > | | | |
| R108 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R109 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R110 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R111 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R112 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R113 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R114 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R115 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R116 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R117 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |

## AMP

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R118 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R119 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R120 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R128 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R129 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R131 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R132 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R133 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R134 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R135 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R136 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R137 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R139 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R141 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R142 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R143 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R144 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R145 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R146 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R147 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R151 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R152 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R153 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R154 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R155 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R156 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R157 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R161 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R162 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R163 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R164 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R165 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R166 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R167 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R171 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R172 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R173 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R174 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R175 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R176 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R177 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R191 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R192 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R193 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R194 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R195 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R196 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R197 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R201 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R202 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R203 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R204 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R205 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R206 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R207 | 1-220-942-11 | METAL CHIP | 3.3 | 1% | 1/4W |
| R211 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R212 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R213 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R214 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R215 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R216 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R217 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R221 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R222 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R223 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R224 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R225 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R226 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R227 | 1-216-136-00 | RES-CHIP | 2.7 | 5% | 1/8W |
| R229 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R231 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R233 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R235 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R237 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R239 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R241 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R242 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R243 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R244 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R245 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R246 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R247 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R300 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R302 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R303 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R304 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R305 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R306 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R308 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R309 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R310 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R311 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R312 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R313 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R314 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R315 | 1-216-803-11 | METAL CHIP | 33 | 5% | 1/10W |
| R316 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R317 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R318 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R319 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R320 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R321 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R322 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R323 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R324 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R325 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R326 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R327 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R328 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R329 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R330 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R331 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R332 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R333 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R334 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |

## AMP

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R335 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R336 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R337 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R338 | 1-218-725-11 | METAL CHIP | 24K | 5% | 1/10W |
| R339 | 1-218-725-11 | METAL CHIP | 24K | 5% | 1/10W |
| R340 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R341 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R342 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R343 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R344 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R345 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R346 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R347 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R348 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R349 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R350 | 1-216-826-11 | METAL CHIP | 2.7K | 5% | 1/10W |
| R351 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R361 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R362 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R363 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R364 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R365 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R366 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R367 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R371 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R372 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R373 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R374 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R375 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R376 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R377 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R378 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R379 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R380 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R381 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R382 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R383 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R384 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R393 | 1-216-801-11 | METAL CHIP | 22 | 5% | 1/10W |
| R394 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/10W |
| R395 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R396 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R400 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R401 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R402 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R403 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R404 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R405 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R406 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R407 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R408 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R409 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R410 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R411 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R412 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R413 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R414 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R425 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |

## CONTROL KEY

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R426 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R427 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R428 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R429 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R430 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R431 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R450 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R451 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R452 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R453 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R454 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R455 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R456 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R457 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R458 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R459 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R460 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R461 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R462 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R463 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R464 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R481 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R482 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R483 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R484 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R485 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R486 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R487 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R488 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R489 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R490 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R491 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R492 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R493 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R494 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R495 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R496 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R497 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| | | < VIBRATOR > | | | |
| X450 | 1-795-660-21 | QUARTZ CRYSTAL UNIT 49.152MHz | | | |

**********

CONTROL KEY BOARD

**********

< CAPACITOR >

| | | | | | |
|---|---|---|---|---|---|
| C816 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C844 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C845 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C851 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C852 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C857 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C858 | 1-164-733-11 | CERAMIC CHIP | 820PF | 10% | 50V |

< CONNECTOR >

| | | | | | |
|---|---|---|---|---|---|
| CN810 | 1-784-859-21 | CONNECTOR, FFC (LIF (NON-ZIF)) 7P | | | |

# CONTROL KEY | DDCON | DISC KEY

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < RESISTOR > | | | |
| R860 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R861 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R866 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R867 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R868 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R874 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R875 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R876 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| | | < SWITCH > | | | |
| ☆ S801 | 1-771-884-31 | SWITCH, TACTILE (FUNCTION) | | | |
| ☆ S807 | 1-771-884-31 | SWITCH, TACTILE (▷/❚❚) | | | |
| ☆ S808 | 1-771-884-31 | SWITCH, TACTILE (I◀◀) | | | |
| ☆ S809 | 1-771-884-31 | SWITCH, TACTILE (+ (VOLUME)) | | | |
| ☆ S815 | 1-771-884-31 | SWITCH, TACTILE (■) | | | |
| ☆ S816 | 1-771-884-31 | SWITCH, TACTILE (▶▶I) | | | |
| ☆ S817 | 1-771-884-31 | SWITCH, TACTILE (– (VOLUME)) | | | |
| ☆ S818 | 1-771-884-31 | SWITCH, TACTILE (⏏) | | | |
| ********** | | | | | |
| | A-4751-769-A | DDCON BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C817 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C818 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C819 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C820 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C821 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C822 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C823 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C824 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C825 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C826 | 1-124-234-00 | ELECT | 22uF | 20% | 10V |
| C827 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C828 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C829 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C830 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 50V |
| C831 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C832 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C833 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C834 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C835 | 1-162-974-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C836 | 1-126-795-11 | ELECT | 10uF | 20% | 50V |
| C837 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| | | < CONNECTOR > | | | |
| CN800 | 1-779-285-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 17P | | | |
| CN801 | 1-779-285-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 17P | | | |
| CN802 | 1-779-281-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 13P | | | |
| | | < DIODE > | | | |
| D810 | 8-719-988-61 | DIODE 1SS355TE-17 | | | |
| D811 | 8-719-988-61 | DIODE 1SS355TE-17 | | | |
| D813 | 8-719-988-61 | DIODE 1SS355TE-17 | | | |
| D814 | 8-719-988-61 | DIODE 1SS355TE-17 | | | |
| D815 | 8-719-069-56 | DIODE UDZSTE-176.2B | | | |

☆ The Part numbers of Ref.No. S801, 807-809, 815-818 are changed with a suffix of the CONTROL KEY board. Please refer to SUPPLEMENT-3 of this manual at the time of replacement.

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < FERRITE BEAD > | | | |
| FB001 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | | | |
| FB002 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | | | |
| FB003 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | | | |
| FB806 | 1-414-813-11 | FERRITE, EMI (SMD)(2012) | | | |
| FB808 | 1-414-813-11 | FERRITE, EMI (SMD)(2012) | | | |
| | | < IC > | | | |
| IC802 | 8-759-366-45 | IC NJU3713G (TE2) | | | |
| | | < COIL > | | | |
| L804 | 1-410-671-31 | INDUCTOR | 47uH | | |
| L805 | 1-400-135-11 | INDUCTOR | 1uH | | |
| L806 | 1-400-135-11 | INDUCTOR | 1uH | | |
| L807 | 1-400-135-11 | INDUCTOR | 1uH | | |
| | | < TRANSISTOR > | | | |
| Q802 | 6-550-065-01 | TRANSISTOR | CPH5504-TL-E | | |
| | | < RESISTOR > | | | |
| R806 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R814 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R815 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R817 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R818 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R819 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R823 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R826 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R827 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R829 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R830 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R831 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R833 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R834 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R835 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R837 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R838 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R839 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R841 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R850 | 1-216-828-11 | METAL CHIP | 3.9K | 5% | 1/10W |
| | | < TRANSFORMER > | | | |
| T801 | 1-443-325-11 | TRANSFORMER, DC-DC CONVERTER | | | |
| ********** | | | | | |
| | | DISC KEY BOARD | | | |
| | | ********** | | | |
| | | < CONNECTOR > | | | |
| CN804 | 1-779-550-21 | CONNECTOR, FFC (LIF (NON-ZIF)) 13P | | | |
| | | < DIODE > | | | |
| D806 | 8-719-079-89 | DIODE SML-020MDT-T86 (DISC 1) | | | |
| D807 | 8-719-079-89 | DIODE SML-020MDT-T86 (DISC 2) | | | |
| D808 | 8-719-079-89 | DIODE SML-020MDT-T86 (DISC 3) | | | |
| D809 | 8-719-079-89 | DIODE SML-020MDT-T86 (DISC 4) | | | |
| D812 | 8-719-079-89 | DIODE SML-020MDT-T86 (DISC 5) | | | |

# DISC KEY DMB08

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < RESISTOR > | | | |
| R862 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R863 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R864 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R865 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R869 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R870 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R871 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R872 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R873 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| | | < SWITCH > | | | |
| ☆ S802 | 1-771-884-31 | SWITCH, TACTILE (⏏ (DISC 1)) | | | |
| ☆ S803 | 1-771-884-31 | SWITCH, TACTILE (⏏ (DISC 2)) | | | |
| ☆ S804 | 1-771-884-31 | SWITCH, TACTILE (⏏ (DISC 3)) | | | |
| ☆ S805 | 1-771-884-31 | SWITCH, TACTILE (⏏ (DISC 4)) | | | |
| ☆ S806 | 1-771-884-31 | SWITCH, TACTILE (⏏ (DISC 5)) | | | |
| ☆ S810 | 1-771-884-31 | SWITCH, TACTILE (DISC 1) | | | |
| ☆ S811 | 1-771-884-31 | SWITCH, TACTILE (DISC 2) | | | |
| ☆ S812 | 1-771-884-31 | SWITCH, TACTILE (DISC 3) | | | |
| ☆ S813 | 1-771-884-31 | SWITCH, TACTILE (DISC 4) | | | |
| ☆ S814 | 1-771-884-31 | SWITCH, TACTILE (DISC 5) | | | |
| ********** | | | | | |
| | A-4751-785-A | DMB08 BOARD, COMPLETE (FR1) | | | |
| | A-4753-404-A | DMB08 BOARD, COMPLETE (FR8) | | | |
| | A-4753-472-A | DMB08 BOARD, COMPLETE (FR9) | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C001 | 1-126-206-11 | ELECT CHIP | 100uF | 20% | 6.3V |
| C002 | 1-164-947-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C003 | 1-126-206-11 | ELECT CHIP | 100uF | 20% | 6.3V |
| C004 | 1-126-204-11 | ELECT CHIP | 47uF | 20% | 16V |
| C005 | 1-126-246-11 | ELECT CHIP | 220uF | 20% | 4V |
| C006 | 1-117-681-11 | ELECT CHIP | 100uF | 20% | 16V |
| C008 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C009 | 1-164-947-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C010 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C011 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C014 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C015 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C016 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C017 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C018 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C019 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C020 | 1-126-246-11 | ELECT CHIP | 220uF | 20% | 4V |
| C022 | 1-126-209-11 | ELECT CHIP | 100uF | 20% | 4V |
| C201 | 1-126-246-11 | ELECT CHIP | 220uF | 20% | 4V |
| C203 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C204 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C217 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C219 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C225 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C226 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C228 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C229 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C230 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C231 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C232 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C233 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C234 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C235 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C236 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C237 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C238 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C239 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C240 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C241 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C242 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C243 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C244 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C245 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C246 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C247 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C248 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C249 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C250 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C251 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C252 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C253 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C254 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C255 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C257 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C258 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C259 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C260 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C261 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C262 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C263 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C264 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C265 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C266 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C267 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C268 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C269 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C270 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C271 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C274 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C301 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C302 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C303 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C304 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C307 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C308 | 1-127-772-81 | CERAMIC CHIP | 33000PF | 10% | 10V |
| C309 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C310 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C311 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C312 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C313 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C314 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C315 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C316 | 1-124-779-00 | ELECT CHIP | 10uF | 20% | 16V |
| C317 | 1-164-852-11 | CERAMIC CHIP | 12PF | 5% | 50V |
| C318 | 1-164-852-11 | CERAMIC CHIP | 12PF | 5% | 50V |

☆ The Part numbers of Ref.No. S802-806, 810-814 are changed with a suffix of the DISC KEY board. Please refer to SUPPLEMENT-3 of this manual at the time of replacement.

## DMB08

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C319 | 1-164-862-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C320 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C355 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C356 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C401 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C402 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C404 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C405 | 1-124-779-00 | ELECT CHIP | 10uF | 20% | 16V |
| C406 | 1-164-939-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C407 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C408 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C409 | 1-164-939-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C410 | 1-124-779-00 | ELECT CHIP | 10uF | 20% | 16V |
| C411 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C412 | 1-164-939-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C413 | 1-164-939-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C414 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C415 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C416 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C417 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C418 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C419 | 1-119-923-11 | CERAMIC CHIP | 0.047uF | 10% | 10V |
| C420 | 1-164-939-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C421 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C422 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C423 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C424 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V |
| C425 | 1-164-939-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C426 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C427 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C428 | 1-164-940-11 | CERAMIC CHIP | 0.0033uF | 10% | 16V |
| C432 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C433 | 1-164-938-11 | CERAMIC CHIP | 0.0015uF | 10% | 50V |
| C434 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C435 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C436 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C503 | 1-127-772-81 | CERAMIC CHIP | 33000PF | 10% | 10V |
| C504 | 1-127-772-81 | CERAMIC CHIP | 33000PF | 10% | 10V |
| C506 | 1-164-934-11 | CERAMIC CHIP | 330PF | 10% | 50V |
| C508 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C509 | 1-164-934-11 | CERAMIC CHIP | 330PF | 10% | 50V |
| C510 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C512 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C514 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C519 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C521 | 1-164-938-11 | CERAMIC CHIP | 0.0015uF | 10% | 50V |
| C523 | 1-164-938-11 | CERAMIC CHIP | 0.0015uF | 10% | 50V |
| C524 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C525 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C526 | 1-126-395-11 | ELECT CHIP | 22uF | 20% | 16V |
| C527 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C528 | 1-126-205-11 | ELECT CHIP | 47uF | 20% | 6.3V |
| C529 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C552 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C600 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C601 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C602 | 1-117-681-11 | ELECT CHIP | 100uF | 20% | 16V |
| C603 | 1-164-858-11 | CERAMIC CHIP | 22PF | 5% | 50V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C604 | 1-164-868-11 | CERAMIC CHIP | 56PF | 5% | 50V |
| C605 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C606 | 1-126-206-11 | ELECT CHIP | 100uF | 20% | 6.3V |
| C607 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C608 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C609 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C610 | 1-126-205-11 | ELECT CHIP | 47uF | 20% | 6.3V |
| C611 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C612 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C613 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C614 | 1-126-193-11 | ELECT CHIP | 1uF | 20% | 50V |
| C615 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C616 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C617 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C618 | 1-124-779-00 | ELECT CHIP | 10uF | 20% | 16V |
| C619 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C620 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C622 | 1-124-779-00 | ELECT CHIP | 10uF | 20% | 16V |
| C624 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C625 | 1-126-193-11 | ELECT CHIP | 1uF | 20% | 50V |
| C626 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C627 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C628 | 1-124-779-00 | ELECT CHIP | 10uF | 20% | 16V |
| C629 | 1-164-854-11 | CERAMIC CHIP | 15PF | 5% | 50V |
| C630 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C631 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C632 | 1-164-854-11 | CERAMIC CHIP | 15PF | 5% | 50V |
| C633 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C634 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C635 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C636 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C637 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C638 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C639 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C640 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C641 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C642 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C643 | 1-126-246-11 | ELECT CHIP | 220uF | 20% | 4V |
| C644 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C646 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C647 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C648 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C650 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C651 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C652 | 1-126-246-11 | ELECT CHIP | 220uF | 20% | 4V |
| C653 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C655 | 1-126-206-11 | ELECT CHIP | 100uF | 20% | 6.3V |
| C657 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C660 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C661 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C664 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C665 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C666 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C667 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C668 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C669 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C670 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C671 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C672 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |

## DMB08

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C673 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C674 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C675 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C679 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C702 | 1-126-209-11 | ELECT CHIP | 100uF | 20% | 4V |
| C703 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C706 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C708 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C709 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C711 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C712 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C713 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C714 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C715 | 1-164-938-11 | CERAMIC CHIP | 0.0015uF | 10% | 50V |
| C716 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C717 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C718 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C720 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C721 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C722 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C723 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C724 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C725 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C726 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C727 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C728 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C729 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C730 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C740 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C741 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C742 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C743 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C744 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C745 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C752 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C760 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C761 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C762 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C763 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C764 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C765 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C766 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C767 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C768 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C769 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C770 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C771 | 1-119-923-11 | CERAMIC CHIP | 0.047uF | 10% | 10V |
| C772 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C773 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 16V |
| C774 | 1-164-941-11 | CERAMIC CHIP | 0.0047uF | 10% | 16V |
| C775 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C776 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C777 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C778 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C779 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C780 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C781 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C796 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C797 | 1-126-209-11 | ELECT CHIP | 100uF | 20% | 4V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C802 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C803 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C804 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C805 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C807 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C808 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C809 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C810 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C811 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C812 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C813 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C815 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C817 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C818 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C819 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C837 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C838 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C839 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C840 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C841 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C842 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C843 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C848 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C849 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C854 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C855 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C856 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C857 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C861 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C865 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C866 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C867 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C870 | 1-127-772-81 | CERAMIC CHIP | 33000PF | 10% | 10V |
| C871 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C900 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C901 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C902 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C903 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C905 | 1-164-934-11 | CERAMIC CHIP | 330PF | 10% | 50V |
| C906 | 1-164-934-11 | CERAMIC CHIP | 330PF | 10% | 50V |
| C907 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C908 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C909 | 1-127-715-91 | CERAMIC CHIP | 0.22uF | 10% | 16V |
| C910 | 1-104-905-11 | CAPACITOR | 0.22F | | 5.5V |
| C911 | 1-126-205-11 | ELECT CHIP | 47uF | 20% | 6.3V |
| C912 | 1-126-205-11 | ELECT CHIP | 47uF | 20% | 6.3V |
| C913 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C914 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C916 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C917 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C918 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C921 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C922 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C923 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C924 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C925 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C926 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V |

## DMB08

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| C928 | 1-107-820-11 | CERAMIC CHIP 0.1uF | 16V |
| C932 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% | 10V |
| | | < CONNECTOR > | |
| CN001 | 1-784-368-31 | CONNECTOR, FFC/FPC 9P | |
| CN002 | 1-778-957-11 | CONNECTOR, FFC/FPC 29P | |
| CN003 | 1-784-374-31 | CONNECTOR, FFC/FPC 15P | |
| CN004 | 1-784-376-31 | CONNECTOR, FFC/FPC 17P | |
| CN005 | 1-784-376-31 | CONNECTOR, FFC/FPC 17P | |
| CN006 | 1-784-385-31 | CONNECTOR, FFC/FPC 28P | |
| CN008 | 1-815-875-21 | PIN, CONNECTOR (PC BOARD)(12P) | |
| CN301 | 1-764-177-11 | PIN, CONNECTOR (SMD)(1.5mm) 7P | |
| CN401 | 1-778-957-31 | CONNECTOR, FFC/FPC 29P | |
| CN900 | 1-784-367-31 | CONNECTOR, FFC/FPC 8P | |
| | | < DIODE > | |
| D900 | 8-719-053-18 | DIODE 1SR154-400TE-25 | |
| D901 | 8-719-053-18 | DIODE 1SR154-400TE-25 | |
| D902 | 8-719-988-61 | DIODE 1SS355TE-17 | |
| D903 | 8-719-083-02 | DIODE KDS160-RTK | |
| D904 | 8-719-083-02 | DIODE KDS160-RTK | |
| D906 | 8-719-083-02 | DIODE KDS160-RTK | |
| D907 | 8-719-988-61 | DIODE 1SS355TE-17 | |
| | | < FERRITE BEAD > | |
| FB001 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB004 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB005 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB006 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB007 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB008 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB009 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB010 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB011 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB012 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB013 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB014 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB201 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB202 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB901 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | |
| FB902 | 1-216-295-91 | SHORT CHIP 0 | |
| | | < FILTER > | |
| FL003 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL004 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL005 | 1-233-893-21 | FILTER, CHIP EMI | |
| FL006 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL202 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL203 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL204 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL301 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL303 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL304 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL401 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL402 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL603 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL604 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL605 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL606 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL607 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL701 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL702 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL703 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL704 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL705 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL706 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL807 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL810 | 1-234-494-21 | FILTER, EMI REMOVAL (SMD) | |
| FL811 | 1-233-893-21 | FILTER, CHIP EMI | |
| FL812 | 1-233-893-21 | FILTER, CHIP EMI | |
| | | < IC > | |
| IC001 | 8-759-583-47 | IC uPC2933T-E2 | |
| IC002 | 8-759-473-95 | IC uPC2905T-E1 | |
| IC004 | 8-759-473-95 | IC uPC2905T-E1 | |
| IC005 | 8-759-583-47 | IC uPC2933T-E2 | |
| IC006 | 6-700-398-01 | IC uPC2918T-E1 | |
| IC202 | 6-704-069-01 | IC HY57V283220T-6 | |
| * IC203 | 6-703-671-01 | IC BR9040F-WE2 | |
| IC205 | 6-804-534-01 | IC MR27V3202F-13BTP04B9 | |
| IC206 | 6-707-406-01 | IC ZIVA5X-C2F-B | |
| IC215 | 6-707-563-01 | IC TC47VCX16841FT (EL) | |
| IC301 | 8-753-228-87 | IC CXP973064-245R | |
| IC302 | 6-704-004-01 | IC BR24L16F-WE2 | |
| IC303 | 6-700-407-01 | IC SM8707GV-G-E2 | |
| IC401 | 8-752-408-73 | IC CXD3068Q | |
| IC402 | 8-759-693-13 | IC NJM12904V (TE2) | |
| IC501 | 6-702-157-01 | IC FAN8035L | |
| IC600 | 8-759-473-95 | IC uPC2905T-E1 | |
| IC601 | 6-701-011-01 | IC uPC2910T-E1 | |
| IC603 | 8-759-693-13 | IC NJM12904V (TE2) | |
| IC604 | 6-704-037-01 | IC IS61LV6416-10TLT | |
| IC605 | 8-759-835-63 | IC NJM2391DL1-26 (TE1) | |
| IC606 | 8-759-825-15 | IC LC89056W-E | |
| IC607 | 6-705-900-01 | IC CXD9718BQ | |
| IC608 | 6-703-704-01 | IC AK4381VT-E2 | |
| IC609 | 6-701-834-01 | IC PCM1802DBR | |
| IC612 | 6-703-372-01 | IC CXD9742Q | |
| IC701 | 6-703-552-01 | IC TMC57929PGF-RDP | |
| IC703 | 8-759-693-13 | IC NJM12904V (TE2) | |
| IC704 | 6-702-301-01 | IC TK11125CSCL-G | |
| IC706 | 8-759-564-30 | IC MSM51V18165F-60TSKR1 | |
| IC801 | 8-752-416-77 | IC CXD2753R | |
| IC802 | 8-759-058-64 | IC TC7S32FU (TE85R) | |
| IC803 | 6-704-753-01 | IC SN74AHC2G74HDCUR | |
| IC808 | 6-702-336-01 | IC MSM56V16160F-8TK7R1 | |
| IC812 | 8-759-549-15 | IC SN74LV245APWR | |
| IC813 | 8-759-549-15 | IC SN74LV245APWR | |
| IC814 | 6-704-768-01 | IC SN74AHC2G157HDCU3 | |
| IC900 | 8-759-238-47 | IC TC74HCT7007AF (EL) | |
| IC901 | 6-804-543-01 | IC uPD703033BYGF-M60-3BA-A | |
| IC902 | 6-703-679-11 | IC PT8300R-TP | |
| IC903 | 6-703-873-01 | IC PST3241NL | |
| IC904 | 8-759-648-48 | IC TC7W34FU (TE12R) | |
| IC906 | 6-703-679-11 | IC PT8300R-TP | |
| IC907 | 6-706-087-01 | IC PST3645NR | |

**DMB08**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < JUMPER RESISTOR > | | | |
| JW900 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| JW903 | 1-218-990-11 | SHORT CHIP | 0 | | |
| | | < COIL > | | | |
| L301 | 1-414-754-11 | INDUCTOR | 10uH | | |
| L600 | 1-414-754-11 | INDUCTOR | 10uH | | |
| L601 | 1-414-754-11 | INDUCTOR | 10uH | | |
| L602 | 1-414-754-11 | INDUCTOR | 10uH | | |
| | | < TRANSISTOR > | | | |
| Q301 | 8-729-027-43 | TRANSISTOR | DTC114EKA-T146 | | |
| Q302 | 8-729-027-43 | TRANSISTOR | DTC114EKA-T146 | | |
| Q900 | 8-729-027-23 | TRANSISTOR | DTA114EKA-T146 | | |
| Q901 | 8-729-120-28 | TRANSISTOR | 2SC2412K-T-146-QR | | |
| Q902 | 8-729-027-23 | TRANSISTOR | DTA114EKA-T146 | | |
| Q903 | 8-729-024-91 | TRANSISTOR | 2SC2712-GL-TE85L | | |
| Q906 | 8-729-024-91 | TRANSISTOR | 2SC2712-GL-TE85L | | |
| Q907 | 8-729-024-91 | TRANSISTOR | 2SC2712-GL-TE85L | | |
| Q908 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| Q909 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| Q910 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| Q913 | 8-729-026-49 | TRANSISTOR | 2SA1037AK-T146-QR | | |
| Q914 | 8-729-024-91 | TRANSISTOR | 2SC2712-GL-TE85L | | |
| | | < RESISTOR > | | | |
| R012 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R019 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R027 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R033 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R035 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R038 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R040 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R042 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R043 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R044 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R045 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R046 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R048 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R049 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R050 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R059 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R064 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R071 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R075 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R076 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R081 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R085 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R092 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R093 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R094 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R097 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R098 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R099 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R100 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R101 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R102 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R103 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R104 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R202 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R203 | 1-208-869-11 | METAL CHIP | 180 | 0.5% | 1/16W |
| R204 | 1-218-952-11 | RES-CHIP | 820 | 5% | 1/16W |
| R206 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R207 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R208 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R209 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R210 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R212 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R213 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R215 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R216 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R217 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R218 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R219 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R220 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R221 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R222 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R223 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R224 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R225 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R226 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R227 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R228 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R229 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R230 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R231 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R232 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R233 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R234 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R236 | 1-208-683-11 | METAL CHIP | 1K | 0.5% | 1/16W |
| R238 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R239 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R241 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R242 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R243 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R244 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R245 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R246 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R247 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R248 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R249 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R250 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R252 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R253 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R255 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R256 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R257 | 1-500-284-21 | INDUCTOR, FERRITE BEAD | | | |
| R258 | 1-500-284-21 | INDUCTOR, FERRITE BEAD | | | |
| R259 | 1-500-284-21 | INDUCTOR, FERRITE BEAD | | | |
| R260 | 1-500-284-21 | INDUCTOR, FERRITE BEAD | | | |
| R261 | 1-500-284-21 | INDUCTOR, FERRITE BEAD | | | |
| R262 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R263 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R264 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R265 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R266 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |

## DMB08

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R303 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R304 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R305 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R306 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R307 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R308 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R311 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R312 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R316 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R317 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R318 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R321 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R323 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R324 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R325 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R326 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R327 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R328 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R329 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R330 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R331 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R332 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R333 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R335 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R337 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R344 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R346 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R350 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R353 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R354 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R355 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R356 | 1-218-939-11 | RES-CHIP | 68 | 5% | 1/16W |
| R357 | 1-218-939-11 | RES-CHIP | 68 | 5% | 1/16W |
| R358 | 1-218-939-11 | RES-CHIP | 68 | 5% | 1/16W |
| R359 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R360 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R361 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R362 | 1-218-943-11 | RES-CHIP | 150 | 5% | 1/16W |
| R363 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R364 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R401 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R411 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R412 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R413 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R414 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R416 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R418 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R419 | 1-218-975-11 | RES-CHIP | 68K | 5% | 1/16W |
| R420 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R421 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R423 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R425 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R426 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R428 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R429 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R430 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R433 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R434 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R437 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R439 | 1-218-947-11 | RES-CHIP | 330 | 5% | 1/16W |
| R440 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R441 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R442 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R443 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R444 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R445 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R446 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R447 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R448 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R449 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R450 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R451 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R452 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R453 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R455 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R457 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W |
| R510 | 1-208-939-11 | METAL CHIP | 150K | 0.5% | 1/16W |
| R511 | 1-208-939-11 | METAL CHIP | 150K | 0.5% | 1/16W |
| R512 | 1-208-929-11 | METAL CHIP | 56K | 0.5% | 1/16W |
| R513 | 1-208-929-11 | METAL CHIP | 56K | 0.5% | 1/16W |
| R514 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R515 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R516 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R517 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R519 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R520 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R521 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R522 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R523 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R524 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R525 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R527 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R529 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R530 | 1-218-974-11 | RES-CHIP | 56K | 5% | 1/16W |
| R531 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R532 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R533 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R534 | 1-218-974-11 | RES-CHIP | 56K | 5% | 1/16W |
| R535 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R536 | 1-220-210-11 | RES-CHIP | 200K | 5% | 1/16W |
| R538 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R540 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R541 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R544 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R545 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R579 | 1-218-964-11 | RES-CHIP | 8.2K | 5% | 1/16W |
| R580 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R581 | 1-218-966-11 | RES-CHIP | 12K | 5% | 1/16W |
| R582 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R583 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R590 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R592 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R599 | 1-218-990-11 | SHORT CHIP | 0 | | |

## DMB08

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R600 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R601 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R602 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R603 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R604 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R605 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R606 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R607 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R608 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W |
| R609 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R610 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R611 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R612 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R613 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R614 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R615 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R616 | 1-218-962-11 | RES-CHIP | 5.6K | 5% | 1/16W |
| R618 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R619 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R621 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R622 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R623 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R624 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R625 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W |
| R626 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R627 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R628 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R629 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R630 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R631 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R634 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R637 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R639 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R640 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R642 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R645 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R648 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R655 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R657 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R658 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R659 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R661 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R662 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R663 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R664 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R666 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R667 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R671 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R672 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R673 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R674 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R675 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R676 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R677 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R678 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R679 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R680 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R683 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R685 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R687 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R688 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R689 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R691 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R692 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R697 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R698 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R699 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R702 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R703 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R704 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R705 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R706 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R707 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R708 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R709 | 1-218-979-11 | RES-CHIP | 150K | 5% | 1/16W |
| R710 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R711 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R712 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R713 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R714 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R715 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R716 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R717 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R718 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R719 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R720 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R721 | 1-208-923-11 | METAL CHIP | 33K | 0.5% | 1/16W |
| R724 | 1-208-683-11 | METAL CHIP | 1K | 0.5% | 1/16W |
| R725 | 1-208-689-11 | METAL CHIP | 1.8K | 0.5% | 1/16W |
| R726 | 1-208-935-11 | METAL CHIP | 100K | 0.5% | 1/16W |
| R727 | 1-208-695-11 | METAL CHIP | 3.3K | 0.5% | 1/16W |
| R728 | 1-208-911-11 | METAL CHIP | 10K | 0.5% | 1/16W |
| R729 | 1-218-964-11 | RES-CHIP | 8.2K | 5% | 1/16W |
| R730 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R731 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R732 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R735 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R737 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R738 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R739 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R740 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R741 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R742 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R743 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R744 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R745 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R746 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R747 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R748 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R750 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R760 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R762 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R763 | 1-218-964-11 | RES-CHIP | 8.2K | 5% | 1/16W |
| R764 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R765 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R767 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |

## DMB08

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R768 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R771 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R772 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R776 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R777 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R778 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R780 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R781 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R799 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R800 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R803 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R804 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R805 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R806 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R808 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R821 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R822 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R823 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R826 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R827 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R828 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R829 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R830 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R831 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R839 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R842 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R847 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R848 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R849 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R850 | 1-218-933-11 | RES-CHIP | 22 | 5% | 1/16W |
| R867 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R882 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R883 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R884 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R885 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R886 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R887 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R888 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R889 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R890 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R891 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R892 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R894 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R895 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R896 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R897 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R898 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R899 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R900 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R901 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R902 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R903 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R904 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R905 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R906 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W |
| R907 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W |
| R908 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R909 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R910 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R911 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R912 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R913 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R914 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R915 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R916 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R917 | 1-218-952-11 | RES-CHIP | 820 | 5% | 1/16W |
| R918 | 1-218-952-11 | RES-CHIP | 820 | 5% | 1/16W |
| R919 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R920 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R921 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R922 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R924 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R925 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R926 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R927 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R928 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R929 | 1-218-964-11 | RES-CHIP | 8.2K | 5% | 1/16W |
| R930 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R931 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R932 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R933 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R935 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W (FR8) |
| R935 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W (FR9) |
| R936 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W |
| R938 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R939 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R940 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R941 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R942 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R943 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R944 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R945 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R949 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R950 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R951 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R953 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R954 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R955 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R957 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R959 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R960 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R961 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R962 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R963 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R964 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R966 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R967 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R968 | 1-218-941-81 | RES-CHIP | 100 | 5% | 1/16W |
| R969 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W (FR1) |
| R969 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W (FR8) |
| R971 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R972 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R973 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R977 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R978 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R979 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R980 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R981 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R983 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R984 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R985 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R986 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R987 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R989 | 1-218-990-11 | SHORT CHIP | 0 | | |
| R990 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R991 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R992 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R994 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R995 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R996 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R997 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R998 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R1000 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1001 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1002 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1003 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1004 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1005 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1006 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1007 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1008 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1009 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1010 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1011 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R1012 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| | | < NETWORK RESISTOR > | | | |
| RB901 | 1-233-270-11 | NETWORK, RES (8 GANG) 10K | | | |
| RB902 | 1-233-270-11 | NETWORK, RES (8 GANG) 10K | | | |
| | | < VIBRATOR > | | | |
| X301 | 1-795-375-11 | VIBRATOR, CERAMIC 20MHz | | | |
| X302 | 1-795-630-11 | VIBRATOR, CRYSTAL 27MHz | | | |
| X600 | 1-781-465-21 | VIBRATOR, CRYSTAL 12.288MHz | | | |
| X601 | 1-813-325-11 | VIBRATOR, CRYSTAL 13.9MHz | | | |
| X901 | 1-795-375-11 | VIBRATOR, CERAMIC 20MHz | | | |
| ********** | | | | | |
| | A-4751-757-A | FL BOARD, COMPLETE<br>********** | | | |
| | | < CAPACITOR > | | | |
| C805 | 1-126-795-11 | ELECT | 10uF | 20% | 50V |
| C807 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C841 | 1-117-370-11 | CERAMIC CHIP | 10uF | | 10V |
| C842 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C843 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C846 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C847 | 1-164-245-11 | CERAMIC CHIP | 0.015uF | 10% | 25V |
| C848 | 1-162-974-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C849 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C850 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| | | < CONNECTOR > | | | |
| CN803 | 1-779-554-21 | CONNECTOR, FFC (LIF (NON-ZIF)) 17P | | | |
| CN812 | 1-784-859-21 | CONNECTOR, FFC (LIF (NON-ZIF)) 7P | | | |
| | | < FERRITE BEAD > | | | |
| FB005 | 1-469-144-21 | FERRITE, EMI (SMD)(2012) | | | |
| FB807 | 1-414-813-11 | FERRITE, EMI (SMD)(2012) | | | |
| | | < FLUORESCENT INDICATOR > | | | |
| FL801 | 1-519-759-11 | INDICATOR TUBE, FLUORESCENT | | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < IC > | | | |
| IC801 | 8-759-826-33 | IC NJL73H400A ( R ) | | | |
| IC803 | 6-705-899-01 | IC ML9208-03MBZ03B | | | |
| | | < TRANSISTOR > | | | |
| Q810 | 8-729-120-28 | TRANSISTOR | 2SC1623-T1-L5L6 | | |
| | | < RESISTOR > | | | |
| R828 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R840 | 1-216-827-11 | METAL CHIP | 3.3K | 5% | 1/10W |
| R843 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R844 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R849 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R851 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R852 | 1-216-805-11 | METAL CHIP | 47 | 5% | 1/10W |
| R853 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R877 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R878 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R879 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R880 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R881 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R882 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| ********** | | | | | |
| | | HP BOARD<br>********* | | | |
| | | < CAPACITOR > | | | |
| C800 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C801 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C802 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C803 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C804 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| C806 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| C853 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C854 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| | | < CONNECTOR > | | | |
| * CN811 | 1-566-002-11 | PIN, CONNECTOR (PC BOARD) 5P | | | |
| | | < DIODE > | | | |
| D800 | 8-719-988-61 | DIODE 1SS355TE-17 | | | |
| D801 | 8-719-988-61 | DIODE 1SS355TE-17 | | | |
| | | < FERRITE BEAD > | | | |
| FB800 | 1-500-284-21 | INDUCTOR, FERRITE BEAD | | | |
| FB802 | 1-469-144-21 | FERRITE, EMI (SMD)(2012) | | | |
| FB803 | 1-469-144-21 | FERRITE, EMI (SMD)(2012) | | | |
| FB805 | 1-469-144-21 | FERRITE, EMI (SMD)(2012) | | | |
| FB810 | 1-469-324-21 | FERRITE, EMI (SMD)(2012) | | | |
| | | < JACK > | | | |
| J800 | 1-794-453-11 | JACK (PHONES) | | | |
| | | < COIL > | | | |
| L800 | 1-410-387-11 | INDUCTOR | 33uH | | |
| L801 | 1-410-387-11 | INDUCTOR | 33uH | | |
| L802 | 1-469-144-21 | FERRITE, EMI (SMD)(2012) | | | |
| L803 | 1-469-144-21 | FERRITE, EMI (SMD)(2012) | | | |

**HP** **IO**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < TRANSISTOR > | | | |
| Q800 | 8-729-920-31 | TRANSISTOR | DTC343TK-T-146 | | |
| Q801 | 8-729-920-31 | TRANSISTOR | DTC343TK-T-146 | | |
| Q803 | 8-729-920-31 | TRANSISTOR | DTC343TK-T-146 | | |
| Q804 | 8-729-920-31 | TRANSISTOR | DTC343TK-T-146 | | |
| | | < RESISTOR > | | | |
| R800 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R801 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R802 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R803 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R805 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R807 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| ********** | | | | | |
| | A-4751-753-A | IO BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C101 | 1-162-967-11 | CERAMIC CHIP | 0.0033uF | 10% | 50V |
| C102 | 1-162-967-11 | CERAMIC CHIP | 0.0033uF | 10% | 50V |
| C103 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C105 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V |
| C106 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V |
| C107 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C108 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C109 | 1-104-509-11 | CERAMIC CHIP | 0.018uF | 10% | 16V |
| C110 | 1-104-509-11 | CERAMIC CHIP | 0.018uF | 10% | 16V |
| C111 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C112 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C212 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C216 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C217 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C218 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C221 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V |
| C222 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V |
| C223 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V |
| C224 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C225 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C227 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C229 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C234 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C235 | 1-126-916-11 | ELECT | 1000uF | 20% | 6.3V |
| C238 | 1-126-916-11 | ELECT | 1000uF | 20% | 6.3V |
| C239 | 1-126-916-11 | ELECT | 1000uF | 20% | 6.3V |
| C240 | 1-126-916-11 | ELECT | 1000uF | 20% | 6.3V |
| C241 | 1-126-916-11 | ELECT | 1000uF | 20% | 6.3V |
| C278 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C603 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C604 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C605 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C606 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C607 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C608 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C609 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C610 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C611 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C612 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C624 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C625 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C626 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C627 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C628 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C629 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C631 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C632 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C633 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C634 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C635 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C636 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C637 | 1-104-662-91 | ELECT | 22uF | 20% | 25V |
| C638 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C639 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C645 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C646 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| | | < CONNECTOR > | | | |
| CN102 | 1-816-955-11 | CONNECTOR, FFC/FPC 11P | | | |
| CN201 | 1-784-213-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 15P | | | |
| CN601 | 1-779-297-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 29P | | | |
| | | < IC > | | | |
| IC201 | 6-705-602-01 | IC MM1623BFBE | | | |
| IC602 | 8-759-385-76 | IC MC14052 BDR2 | | | |
| IC603 | 6-600-014-01 | IC TORX141L (OPTICAL DIGITAL IN) | | | |
| IC605 | 6-706-078-01 | IC M62429FP-TP | | | |
| IC606 | 6-705-720-01 | IC RC4580IDR | | | |
| | | < JACK > | | | |
| J201 | 1-817-449-11 | JACK, PIN 3P (COMPONENT VIDEO OUT) | | | |
| J202 | 1-694-920-11 | TERMINAL BOARD (S TERMINAL+1P) (MONITOR OUT) | | | |
| J601 | 1-816-918-11 | JACK, PIN 4P (VIDEO/SAT) | | | |
| J602 | 1-774-785-11 | JACK, PIN 1P (SURROUND BACK) | | | |
| | | < COIL > | | | |
| L101 | 1-469-525-91 | INDUCTOR | 10uH | | |
| L209 | 1-469-525-91 | INDUCTOR | 10uH | | |
| L214 | 1-216-864-11 | SHORT CHIP | 0 | | |
| L601 | 1-469-525-91 | INDUCTOR | 10uH | | |
| L602 | 1-469-525-91 | INDUCTOR | 10uH | | |
| | | < TRANSISTOR > | | | |
| Q101 | 8-729-120-28 | TRANSISTOR | 2SC2412K-T-146-QR | | |
| Q102 | 8-729-120-28 | TRANSISTOR | 2SC2412K-T-146-QR | | |
| Q604 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| Q605 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| Q606 | 8-729-920-31 | TRANSISTOR | DTC343TK-T-146 | | |
| Q607 | 8-729-920-31 | TRANSISTOR | DTC343TK-T-146 | | |
| | | < RESISTOR > | | | |
| R101 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R103 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R106 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R107 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R108 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |

IO | LF | MODE MOTOR | PW KEY | RELAY

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R109 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R110 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R111 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R112 | 1-218-867-11 | METAL CHIP | 6.8K | 5% | 1/10W |
| R113 | 1-218-867-11 | METAL CHIP | 6.8K | 5% | 1/10W |
| R114 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R115 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R116 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R117 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R118 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R119 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R128 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R203 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R204 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R224 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R225 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R226 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R227 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R228 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R229 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R230 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R234 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R601 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R602 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R603 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R604 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R605 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R607 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R608 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R609 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R610 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R621 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R622 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R623 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R624 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R625 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R626 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R627 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R628 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R629 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R630 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R631 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R632 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R633 | 1-216-823-11 | METAL CHIP | 1.5K | 5% | 1/10W |
| R634 | 1-216-823-11 | METAL CHIP | 1.5K | 5% | 1/10W |
| R635 | 1-218-867-11 | METAL CHIP | 6.8K | 5% | 1/10W |
| R636 | 1-218-867-11 | METAL CHIP | 6.8K | 5% | 1/10W |
| R645 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R647 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R648 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R649 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R650 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R651 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R652 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R653 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R654 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R655 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R656 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |

☆ The Part numbers of Ref.No. S800 is changed with a suffix of the PW KEY board. Please refer to SUPPLEMENT-3 of this manual at the time of replacement.

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R657 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R659 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R661 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R664 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| | | LF BOARD | | | |
| | | ******** | | | |
| | | < CAPACITOR > | | | |
| ⚠C903 | 1-117-916-51 | FILM | 0.22uF | 10% | 275V |
| | | < CONNECTOR > | | | |
| CN900 | 1-564-321-00 | PIN, CONNECTOR (3.96mm PITCH) 2P | | | |
| * CN901 | 1-564-321-21 | PIN, CONNECTOR (3.96mm PITCH) 2P | | | |
| | | < LINE FILTER > | | | |
| ⚠LF901 | 1-456-081-21 | COIL, LINE FILTER | | | |
| | | MODE MOTOR BOARD | | | |
| | | ****************** | | | |
| | | PW KEY BOARD | | | |
| | | ************ | | | |
| | | < CAPACITOR > | | | |
| C811 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| | | < CONNECTOR > | | | |
| * CN805 | 1-568-941-11 | PIN, CONNECTOR 3P | | | |
| | | < DIODE > | | | |
| D802 | 6-500-817-01 | DIODE (LED) SML-512UWT86 (I/⏻) | | | |
| | | < RESISTOR > | | | |
| R809 | 1-216-864-11 | SHORT CHIP | 0 | | |
| | | < SWITCH > | | | |
| ☆ S800 | 1-771-884-31 | SWITCH, TACTILE (I/⏻) | | | |
| | A-4728-700-A | RELAY BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C711 | 1-126-795-11 | ELECT | 10uF | 20% | 50V |
| C751 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C752 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C753 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C754 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |

| | |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une pièce portant le numéro spécifié. |

## RELAY RF

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C755 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C756 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C758 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C761 | 1-162-306-11 | CERAMIC | 0.01uF | 30% | 16V |
| C762 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C763 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C764 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C765 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C766 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C767 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C768 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C769 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C771 | 1-162-306-11 | CERAMIC | 0.01uF | 30% | 16V |
| C781 | 1-162-306-11 | CERAMIC | 0.01uF | 30% | 16V |
| | | < CONNECTOR > | | | |
| CN701 | 1-779-565-21 | CONNECTOR, FFC (LIF (NON-ZIF)) 28P | | | |
| CN702 | 1-785-329-11 | PIN, CONNECTOR (LIGHT ANGLE) 3P | | | |
| CN703 | 1-785-328-11 | PIN, CONNECTOR (LIGHT ANGLE) 2P | | | |
| CN704 | 1-785-328-21 | PIN, CONNECTOR (LIGHT ANGLE) 2P | | | |
| CN710 | 1-568-945-11 | PIN, CONNECTOR 7P | | | |
| | | < DIODE > | | | |
| D701 | 8-719-921-40 | DIODE MTZJ-T-77-4.7B | | | |
| D711 | 8-719-921-42 | DIODE MTZJ-T-77-5.1A | | | |
| D721 | 8-719-982-03 | DIODE MTZJ-T-77-3.6A | | | |
| | | < IC > | | | |
| IC701 | 8-759-598-69 | IC BA6956AN | | | |
| IC711 | 8-759-598-69 | IC BA6956AN | | | |
| IC721 | 8-759-598-69 | IC BA6956AN | | | |
| | | < TRANSISTOR > | | | |
| Q731 | 8-729-029-66 | TRANSISTOR RT1N141S-TP | | | |
| | | < RESISTOR > | | | |
| R701 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R702 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R711 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R712 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R721 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R722 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R731 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R732 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R733 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R734 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W |

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| | | | | | |
|---|---|---|---|---|---|
| | A-4728-690-A | RF BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C001 | 1-126-206-11 | ELECT CHIP | 100uF | 20% | 6.3V |
| C002 | 1-124-779-00 | ELECT CHIP | 10uF | 20% | 16V |
| C003 | 1-126-206-11 | ELECT CHIP | 100uF | 20% | 6.3V |
| C004 | 1-124-779-00 | ELECT CHIP | 10uF | 20% | 16V |
| C005 | 1-128-993-21 | ELECT CHIP | 22uF | 20% | 10V |
| C006 | 1-128-993-21 | ELECT CHIP | 22uF | 20% | 10V |
| C008 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C009 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C010 | 1-115-416-11 | CERAMIC CHIP | 0.001uF | 5% | 25V |
| C011 | 1-115-416-11 | CERAMIC CHIP | 0.001uF | 5% | 25V |
| C012 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C013 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C014 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C015 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C016 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C017 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C018 | 1-164-172-11 | CERAMIC CHIP | 0.0056uF | 10% | 25V |
| C019 | 1-164-172-11 | CERAMIC CHIP | 0.0056uF | 10% | 25V |
| C020 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C021 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C022 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C023 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C024 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C025 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C026 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C027 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C028 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C029 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C030 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C031 | 1-115-416-11 | CERAMIC CHIP | 0.001uF | 5% | 25V |
| C032 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C033 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C034 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C035 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C036 | 1-125-891-11 | CERAMIC CHIP | 0.47uF | 10% | 10V |
| C037 | 1-162-959-11 | CERAMIC CHIP | 330PF | 5% | 50V |
| C038 | 1-164-677-11 | CERAMIC CHIP | 0.033uF | 10% | 16V |
| C039 | 1-164-677-11 | CERAMIC CHIP | 0.033uF | 10% | 16V |
| C040 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C041 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C042 | 1-164-218-11 | CERAMIC CHIP | 180PF | 0.25PF | 50V |
| C049 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C050 | 1-162-967-11 | CERAMIC CHIP | 0.0033uF | 10% | 50V |
| C051 | 1-125-891-11 | CERAMIC CHIP | 0.47uF | 10% | 10V |
| C052 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| | | < CONNECTOR > | | | |
| CN001 | 1-815-031-11 | CONNECTOR, FFC/FPC (ZIF) 24P | | | |
| CN002 | 1-784-836-21 | CONNECTOR, FFC (LIF (NON-ZIF)) 29P | | | |
| CN003 | 1-784-861-21 | CONNECTOR, FFC (LIF (NON-ZIF)) 9P | | | |
| | | < DIODE > | | | |
| D001 | 8-719-988-61 | DIODE 1SS355TE-17 | | | |
| D002 | 8-719-988-61 | DIODE 1SS355TE-17 | | | |
| | | < IC > | | | |
| IC001 | 6-703-922-01 | IC SP3723CAF0PM | | | |
| IC003 | 6-703-921-01 | IC TL343IDBVR | | | |
| | | < COIL > | | | |
| L001 | 1-412-031-11 | INDUCTOR CHIP | 47uH | | |
| L002 | 1-412-031-11 | INDUCTOR CHIP | 47uH | | |

**RF** **ROLLER MOTOR** **SENSOR** **SONY LAMP** **SPK**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < TRANSISTOR > | | | |
| Q001 | 8-729-903-46 | TRANSISTOR | 2SB1132-T100-QR | | |
| Q002 | 8-729-903-46 | TRANSISTOR | 2SB1132-T100-QR | | |
| | | < RESISTOR > | | | |
| R001 | 1-218-668-11 | METAL CHIP | 100 | 0.5% | 1/16W |
| R003 | 1-216-803-11 | METAL CHIP | 33 | 5% | 1/10W |
| R004 | 1-216-803-11 | METAL CHIP | 33 | 5% | 1/10W |
| R005 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R006 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R007 | 1-216-803-11 | METAL CHIP | 33 | 5% | 1/10W |
| R008 | 1-216-803-11 | METAL CHIP | 33 | 5% | 1/10W |
| R009 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R010 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R011 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R012 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R013 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R014 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R015 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R016 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R017 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R018 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R019 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R020 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R021 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R022 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R023 | 1-216-820-11 | METAL CHIP | 820 | 5% | 1/10W |
| R024 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R025 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R026 | 1-218-718-11 | METAL CHIP | 12K | 0.5% | 1/16W |
| R027 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R028 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R029 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R031 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R033 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R034 | 1-216-817-11 | RES-CHIP | 470 | 5% | 1/10W |
| R035 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/10W |
| R041 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R046 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R047 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R091 | 1-218-913-11 | METAL CHIP | 560K | 0.5% | 1/10W |
| ********** | | | | | |
| | | ROLLER MOTOR BOARD | | | |
| | | ********** | | | |
| ********** | | | | | |
| | 1-685-004-11 | SENSOR BOARD | | | |
| | | ********** | | | |
| | | < PHOTO SENSOR > | | | |
| IC751 | 8-749-017-45 | SENSOR, PHOTO RPR-220C1N (DISC INSERT DETECT SENSOR) | | | |
| ********** | | | | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | SONY LAMP BOARD | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C877 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C878 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| | | < CONNECTOR > | | | |
| CN804 | 1-506-481-11 | PIN, CONNECTOR 2P | | | |
| | | < DIODE > | | | |
| D823 | 6-500-929-01 | DIODE SML-512WBCW1AR (SONY) | | | |
| D824 | 6-500-929-01 | DIODE SML-512WBCW1AR (SONY) | | | |
| | | < RESISTOR > | | | |
| R854 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R855 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| ********** | | | | | |
| | | SPK BOARD | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C340 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C341 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C342 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C343 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C481 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C482 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C483 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C485 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C486 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C484 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C487 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C488 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C491 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C492 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C493 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C494 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C495 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C496 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| | | < CONNECTOR > | | | |
| * CN309 | 1-564-243-11 | PIN, CONNECTOR (3.96mm PITCH) 6P | | | |
| CN311 | 1-691-766-11 | PLUG (MICRO CONNECTOR) 4P | | | |
| CN312 | 1-691-766-21 | PLUG (MICRO CONNECTOR) 4P | | | |
| | | < GROUND TERMINAL > | | | |
| GP307 | 1-537-770-21 | TERMINAL BOARD, GROUND | | | |
| | | < TERMINAL > | | | |
| TB301 | 1-780-122-11 | TERMINAL BOARD (SPEAKER) | | | |
| TB302 | 1-780-121-11 | TERMINAL BOARD (SPEAKER) | | | |
| ********** | | | | | |

## STOCKER MOTOR | SW (1) | SW (2) | SW (3) | SW (4)

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | 1-685-006-11 | STOCKER MOTOR BOARD | |
| | | ********** | |
| ********** | | | |
| | 1-685-008-11 | SW (1) BOARD | |
| | | ********** | |
| | | < SWITCH > | |
| S711 | 1-786-382-11 | SWITCH, PUSH (1 KEY)(DISC INSERT (8/12cm)) | |
| ********** | | | |
| | 1-685-009-11 | SW (2) BOARD | |
| | | ********** | |
| | | < SWITCH > | |
| S713 | 1-786-382-11 | SWITCH, PUSH (1 KEY)(DISC IN (8/12cm)) | |
| S714 | 1-786-382-11 | SWITCH, PUSH (1 KEY)(DISC IN (8cm)) | |
| ********** | | | |
| | 1-685-010-11 | SW (3) BOARD | |
| | | ********** | |
| | | < SWITCH > | |
| S715 | 1-786-382-11 | SWITCH, PUSH (1 KEY)(DISC OUT) | |
| ********** | | | |
| | 1-685-011-11 | SW (4) BOARD | |
| | | ********** | |
| | | < SWITCH > | |
| S716 | 1-786-382-11 | SWITCH, PUSH (1 KEY)(STOCKER IN/OUT) | |
| S717 | 1-786-382-11 | SWITCH, PUSH (1 KEY)(DISC POSITION) | |
| S718 | 1-786-382-11 | SWITCH, PUSH (1 KEY)(STOCKING) | |
| ********** | | | |
| | | MISCELLANEOUS | |
| | | ********** | |
| 4 | 1-763-861-12 | FAN, DC | |
| ⚠6 | 1-783-531-72 | CORD, POWER | |
| 8 | 1-828-962-11 | WIRE (FLAT TYPE)(11 CORE) | |
| 62 | 1-829-320-11 | FLEXIBLE FLAT CABLE (13 CORE) | |
| 63 | 1-829-321-11 | FLEXIBLE FLAT CABLE (17 CORE) | |
| 106 | 1-829-322-11 | FLEXIBLE FLAT CABLE (9 CORE) | |
| 107 | 1-829-319-11 | FLEXIBLE FLAT CABLE (17 CORE) | |
| 108 | 1-828-349-11 | WIRE (FLAT TYPE)(17 CORE) | |
| 109 | 1-829-323-11 | FLEXIBLE FLAT CABLE (29 CORE) | |
| 110 | 1-829-326-11 | FLEXIBLE FLAT CABLE (15 CORE) | |
| 111 | 1-829-325-11 | FLEXIBLE FLAT CABLE (29 CORE) | |
| 112 | 1-829-324-11 | FLEXIBLE FLAT CABLE (28 CORE) | |
| 113 | 1-500-657-11 | CORE, FERRIET | |
| ⚠114 | 1-468-838-11 | REGULATOR, SWITCHING | |
| ⚠603 | 1-477-263-11 | OPTICAL PICK-UP (DBU-1) | |
| 605 | 1-685-250-11 | FLEXIBLE BOARD | |
| M761 | A-4735-953-A | MOTOR (STOCKER) ASSY (MODE) | |
| M771 | A-4735-953-A | MOTOR (STOCKER) ASSY (ROLLER) | |
| M781 | A-4735-953-A | MOTOR (STOCKER) ASSY (STOCKER) | |
| S702 | 1-477-299-11 | ENCODER, ROTARY (STOCKER POSITION) | |
| S771 | 1-477-300-11 | ENCODER, ROTARY (MODE) | |

| | |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une pièce portant le numéro spécifié. |

# HCD-FR1/FR8/FR9

SONY

US Model
HCD-FR1/FR8/FR9
Canadian Model
HCD-FR1

# SERVICE MANUAL

**Ver 1.1 2004.07**

## SUPPLEMENT-1

**Subject: TEST MODE and ELECTRICAL ADJUSTMENT**

**9-879-011-81**

# SECTION 1
# TEST MODE

## [Version Display Mode]

* The software version is displayed.

**Procedure:**

1. Press three buttons of VOLUME-, VOLUME+ and ⏏ simultaneously for two seconds.
2. The message “VERSION” is displayed. The version display mode is activated.
3. Press the ▶▶I button. “IF ***” is displayed.
4. Each time the ▶▶I button is pressed, the display changes in the order of DVD, AREA, VERSION and IF.
5. To exit from this mode, press the I/⏻ button.

## [Key Test Mode]

* Button check

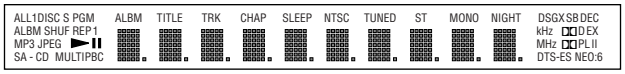
**Procedure:**

1. Press three buttons of VOLUME-, VOLUME+ and FUNCTION simultaneously.
2. The message “KEY NUM 0” is displayed and “0” blinks.
3. Each time a button is pressed, “KEY NUM 0” value increases. However, once a button is pressed, it is no longer taken into account.
4. When all buttons are pressed, “KEY NUM 9” appears and the number blinking is stopped.
5. To exit from this mode, disconnect the power cord.

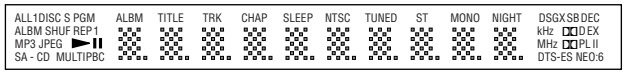
## [Display Test Mode]

**Procedure:**

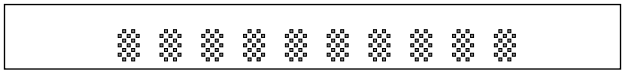
1. Press three buttons of VOLUME-, I◀◀ and ⏏ simultaneously.
2. All segments are turned on.




3. When the ▶▶I button is pressed, the display will light up as follows.




4. Press the ▶▶I button and confirm the display.



5. Press the ▶▶I button, all segments are turned off.
6. Every pressing of the ▶▶I button turns on each segments in the same order.
7. To exit from this mode, press the I/⏻ button.

## [Cold Reset]

* The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customers.

**Procedure:**

1. Press the I/⏻ button to turn the power on.
2. Press three buttons of I◀◀, ▷II and ⏏ simultaneously.
3. When this button is operated, display as “COLD RESET” for a while and all of the settings are reset.

## [Disc Slot Lock]

The disc slot lock function for the antitheft of an demonstration disc in the store is equipped.

**Setting Procedure:**

1. Turn the set on.
2. Press two buttons of ■ and ⏏ simultaneously for five seconds.
3. The message “LOCKED” is displayed and the slot is locked.

**Releasing Procedure:**

1. Press two buttons of ■ and ⏏ simultaneously for five seconds again.
2. The message “UNLOCKED” is displayed and the slot is unlocked.

Note : When “LOCKED” is displayed, the slot lock is not released by turning power on/off with the I/⏻ button.

## [Repeat Limit Release Mode]

**Procedure:**

1. Press three buttons of ⏏, ▶▶I and VOLUME+ simultaneously.
2. Repeat limit is released.

## [CDM Ship Mode]

* This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

**Procedure:**

1. Turn the set on.
2. Set the function to DVD.
3. Press three buttons of ▶▶I, I◀◀ and ⏏ simultaneously.
4. The message “MECHA LOCK” is displayed.
5. The CDM ship mode is set.

## [GENERAL DESCRIPTION]

The Test Mode allows you to make diagnosis and adjustment easily using the remote commander and monitor TV. The instructions, diagnostic results, etc. are given on the on-screen display (OSD).

## [TEST DISC LIST]

Use the following test disc on test mode.

TDV-520CSO (DVD-SL) : PART No. J-2501-236-A
LUV-P01 (CD) : PART No. 4-999-032-01
TDV-540C (DVD-DL) : PART No. J-2501-235-A

**Note:** Do not use exiting test disc for DVD.

## [STARTING TEST MODE]

1. Press the [I/⏻] button to turn the power on, and set the function to DVD.
2. Press three buttons of [⏏] , [■] and [VOLUME+] simultaneously to enter the test mode.
3. It displays "SERVICE IN" on the fluorescent indicator tube, and displays the Test Mode Menu on the monitor screen as follows. (At the bottom of the menu screen, the model name and revision number are displayed)

```
          Test Mode Menu

0. Syscon Diagnosis
1. Drive Auto Adjustment
2. Drive Manual Operation
3. Mecha Aging
4. Emergency History
5. Mecha Error History
6. Version Information
7. Video Level Adjustment
                    Exit: POWER Key
Model    :DAV-xxx     xx
Revision :x.xx
```

4. To execute each function, select the desired menu and press its number on the remote commander (RM-SP350).
5. To release from test mode, press the [I/⏻] button and turn the power off.

## [OPERATING TEST MODE]

## 0. SYSCON DIAGNOSIS

The same contents as board detail check by serial interface can be checked from the remote commander operation.
On the Test Mode Menu screen, press [0] key on the remote commander, and the following Check Menu will be displayed.

```
     ### Syscon Diagnosis ###

           Check Menu
0. Quit
1. All
2. Version
3. EEPROM
4. GPIO
5. SD Bus
6. Video
```

### 0-0. Quit

Quit the Syscon Diagnosis and return to the Test Mode Menu.

### 0-1. All (All items continuous check)

This menu checks all diagnostic items continuously. Normally, all items are checked successively one after another automatically unless an error is found, but at a certain item that requires judgment through a visual check to the result, the following screen is displayed for the key entry.

• *Example display*

```
     ### Syscon Diagnosis ###

          Diag All Check
           No.2 Version

           2-2. Version
ROM Revision = x.xx




Press NEXT Key to Continue
Press PREV Key to Repeat
```

For the ROM Check, the check sum calculated by the Syscon is output, and therefore you must compare it with the specified value for confirmation.
Following the message, press the [▶▶I] button to go to the next item, or press the [I◀◀] button to repeat the same operation again.
To quit the diagnosis and return to Check Menu screen, press the [RETURN] key on the remote commander to display Check Menu.

• Error occurred

If an error occurred, the diagnosis is suspended and error is displayed. Press the [RETURN] key on the remote commander to quit the diagnosis, or press the [I◀◀] button to repeat the same check where an error occurred, or press the [▶▶I] button to continue the check from the item next to faulty item.

### General Description of Checking Method

Selecting 2 and subsequent items calls the submenu screen of each item. And selecting 2 and subsequent items executes respective menus and outputs the results.
For the contents of each submenu, see "Check Items List" as below.

**Check Items List:**

0-2. Version
  0-2-1. All
  0-2-2. Revision
  0-2-3. ROM Check Sum
  0-2-4. Model Type
  0-2-5. Region
0-3. EEPROM Check
  0-3-1. Sampling Check
  0-3-2. Detail Check
0-4. GP I/O Check
0-5. SD Bus Check
0-6. Video Check

### 0-2. Version

0-2-2. Revision
The revision number of ROM (IC205) that the program for the DVD system processor (IC206) is stored.

0-2-3. ROM Check Sum
Check sum is calculated. (4 digits hexadecimal number)

0-2-4. Model Type
Model name is displayed. (DAV-SR4W)

0-2-5. Region
Model destination code is displayed. (2 digits number)

### 0-3. EEPROM Check

0-3-1. Sampling Check
EEPROM check at every 64 words.
It compares read data with write data of each address. When there are discrepancies between two data, it displays error.

0-3-2. Detail Check
EEPROM check at every 1 word.
It compares read data with write data of each address. When there are discrepancies between two data, it displays error.

### 0-4. GP I/O Check

Pull up/down setting check of the DVD system processor (IC206) pin 150, 151 and 154 (for clock setting port).

### 0-5. SD Bus Check

SD bus data check between DVD decoder (IC701) and D-RAM (IC706).

### 0-6. Video Check

Output the color bars for video level adjustment.

## 1. DRIVE AUTO ADJUSTMENT

On the Test Mode Menu screen, press the [1] key on the remote commander, and the Adjustment Menu will be displayed.

```
    ## Drive Auto Adjustment ##
          Adjustment Menu

  0. ALL
  1. DVD-SL
  2. CD
  3. DVD-DL




                        Exit: RETURN
```

Normally, [0] is selected to adjust DVD (single layer), CD and DVD (dual layer) in this order. But, individual items can be adjusted for the case where adjustment is suspended due to an error. In this mode, the adjustment can be made easily through the operation following the message displayed on the screen.
The disc used for adjustment must be the one specified for adjustment.

### 1-0. ALL

Press the [0] key on the remote commander, and the servo set data in EEPROM will be initialized. Then, 1. DVD-SL disc, 2. CD disc and 3. DVD-DL disc are adjusted in this order.
Each time one disc was adjusted, it is ejected. Replace it with the specified disc following the message. You can finish the adjustment by pressing the [RETURN] button on the remote commander.

**Note:** During adjustment of each disc, the measurement for disc type judgment is made. As automatic adjustment does not judge the disc type unlike conventional models, take care not to insert wrong type discs. Also, do not give a shock during adjustment.

### 1-1. DVD-SL (single layer)

Press the [1] key on the remote commander and insert a DVD single layer disc following the message. Then the adjustment will be made through the steps below, then adjusted values will be written to the EEPROM.

**DVD Single Layer Disc Adjustment Steps:**

1. Sled tilt reset
2. Disc check memory SL
3. Wait 300 msec
4. Set disc type SL
5. LD on
6. Spindle start
7. Wait 1 sec
8. Focus servo on 0
9. Auto track offset adjust
10. CLVA on
11. Wait 500 msec
12. Tracking on
13. Wait 1 sec
14. Sled on
15. Check CLV on
16. Auto LFO adjust
17. Auto focus offset adjust
18. Auto tilt position adjust
19. Auto focus gain adjust
20. Auto focus offset adjust
21. EQ boost adjust
22. Auto loop filter offset adjust
23. Auto track gain adjust

Search Check

24. 32 track jump forward
25. 32 track jump reverse
26. 500 track jump forward
27. 500 track jump reverse

28.All servo stop
29.EEP copy loop filter offset

### 1-2. CD

Press the [2] key on the remote commander and insert a CD disc following the message. Then the adjustment will be made through the steps below, then adjusted values will be written to the EEPROM.

### CD Adjustment Steps

1. Sled tilt rest
2. Disc check memory CD
3. Wait 500 msec
4. Set disc type CD
5. LD on
6. Spindle start
7. Wait 500 msec
8. Focus servo on 0
9. Auto track offset adjust
10. CLVA on
11. Wait 500 msec
12. Tracking on
13. (TC display start)
14. Wait 1 sec
15. Jitter display start
16. Sled ON
17. Check CLV on
18. Auto loop filter offset adjust
19. Auto focus offset adjust
20. Auto focus gain adjust
21. Auto focus offset adjust
22. EQ boost adjust
23. Auto LFO Adjust

24. Auto track gain adjust

Search Check

25. 32Tj forward
26. 32Tj reverse
27. 500Tj forward
28. 500Tj reverse

29. All servo stop

### 1-3. DVD-DL (dual layer)

Press the [3] key on the remote commander and insert a DVD dual layer disc following the message. Then the adjustment will be made through the steps below, then adjusted values will be written to the EEPROM.

**DVD Dual Layer Disc Adjustment Steps:**

1. Sled tilt reset
2. Disc check memory DL
3. Wait 500 msec
4. Set disc type DL
5. LD on
6. Spindle start
7. Wait 1 sec

Layer 1 Adjust

8. Focus servo on 0
9. Auto track offset adjust
10. CLVA on
11. Wait 500 msec
12. Tracking on
13. Wait 500 msec
14. Sled on
15. Check CLV lock
16. Auto loop filter offset adjust, Auto focus adjust
17. Auto focus gain adjust
18. Auto focus offset adjust
19. EQ boost adjust
20. Auto loop filter offset adjust
21. Auto Track Gain Adjust

Search Check

22. 32 track jump forward
23. 32 track jump reverse
24. 500 track jump forward
25. 500 track jump reverse

Layer 0 Adjust

26. Focus jump (L1 → L0)
27. Auto track offset adjust L0
28. CLVA on
29. Wait 500 msec
30. Tracking on
31. Wait 500 msec
32. Sled on
33. Check CLV lock
34. Auto focus filter offset adjust
35. Auto Focus Adjust
36. Auto focus gain adjust
37. Auto focus offset adjust
38. EQ boost adjust
39. Auto Loop Filter Offset
40. Auto track gain adjust

Search Check

41. 32 track jump forward
42. 32 track jump reverse
43. 500 track jump forward
44. 500 track jump reverse

Layer Jump Check

45. Layer jump (L0 ? L1)
46. Layer jump (L1 ? L0)

47. All servo stop

## 2. DRIVE MANUAL OPERATION

**Note:** This mode is used for design, and not used in service fundamentally.

On the Test Mode Menu screen, press the [2] key on the remote commander, and the Operation Menu will be displayed. For the manual operation, each servo on/off control and adjustment can be executed manually.

```
   ## Drive Manual Operation ##
         Operation Menu
1. Disc Type
2. Servo Control
3. Track/Layer Jump
4. Non EEPROM Write Adjust
5. EEPROM Write Adjust
6. Memory Check
7. Disc Check Memory
8. Error Rate Display
9. SACD Water Mark

                        Exit: RETURN
```

In using the manual operation menu, take care of the following points. These commands do not provide protection, thus requiring correct operation. The sector address or time code field is displayed when a disc is loaded.

**Note:**

1. Set correctly the disc type to be used on the Disc Type screen.
2. In case of an alarm, immediately press the [■] button to stop the servo operation, and press the [I/⏻] button to turn the power off.

**Basic operation:**

(controllable from front panel or remote commander)

| | |
|---|---|
| [I/⏻] | : Power OFF (release the Test Mode) |
| [■] | : Servo stop |
| [⏏] | : Stop and eject |
| [RETURN] | : Return to Operation Menu or Test Mode Menu |
| [⏮], [⏭] | : Transition between sub modes of menu |
| [1] to [9], [0] | : Selection of menu items |
| Cursor [↓]/[↑] | : Increase/Decrease in manually adjusted value |

### 2-1. Disc Type

```
            Disc Type

         Disc Type Select

  1. Disc Type Auto Check
  2. Set Disc Type DVD
  3. Set Disc Type CD
  4. Set Disc Type Hybrid




                      Exit: RETURN
```

2-1-1. Disc Type Auto Check

1) Press the [1] key on the remote commander to display the Disc Type Auto Check screen.
2) Insert a disc and press the [ENTER] key on the remote commander.
3) It judges the type of inserted disc automatically and displays the disc type and so on as below.

```
        Disc Type Auto Check

  Disc Type      xx
  Layer          xx
  Mirr Time      xx
  Mirr Count     xx
  FZC Count      xx
  PI Reference   xx
  PI Peak        xx

  ENTER.Execute

                      Exit: RETURN
```

Disc Type : CD, DVD or Hybrid (SACD)
Layer : SINGLE, DUAL or HYBRID
Mirr Time : Mirror time of between disc surface and record surface when disc type judgment. (hexadecimal number)
Mirr Count : The number of times which mirror counts between disc surface and record surface when disc type judging. (hexadecimal number)
FZC Count : The number of times which focus zero cross points of each layer when lens down. (hexadecimal number)
PI Reference : The average of PI reference voltage. (hexadecimal number)
PI Peak : PI peak level voltage. It performs only when disc type judgment is successful. (hexadecimal number)

2-1-2. Disc Type DVD

It sets up so that it may judge as a disc type of specification of the disc with which the set was inserted.

[1]: DVD single layer disc (12 cm)
[2]: DVD dual layer disc (0 layer, 12 cm)
[3]: DVD dual layer disc (1 layer, 12 cm)
[4]: DVD-RW disc (12 cm)
[5]: DVD single layer disc (8 cm)
[6]: DVD dual layer disc (0 layer, 8 cm)
[7]: DVD dual layer disc (1 layer, 8 cm)

2-1-3. Disc Type CD

It sets up so that it may judge as a disc type of specification of the disc with which the set was inserted.

[1]: CD disc (normal speed, 12 cm)
[2]: CD disc (double speed, 12 cm)
[3]: CD disc (normal speed, 8 cm)
[4]: CD disc (double speed, 8 cm)
[5]: CD-RW disc (normal speed, 12 cm)
[6]: CD-RW disc (double speed, 12 cm)
[7]: CD-RW disc (normal speed, 8 cm)
[8]: CD-RW disc (double speed, 8 cm)

2-1-4. Disc Type Hybrid

It sets up so that it may judge as a disc type of specification of the disc with which the set was inserted.

[1]: SACD Hybrid disc (SACD layer, 12 cm)
[2]: SACD Hybrid disc (CD layer, normal speed, 12 cm)
[3]: SACD Hybrid disc (CD layer, double speed, 12 cm)
[4]: SACD Hybrid disc (SACD layer, 8 cm)
[5]: SACD Hybrid disc (CD layer, normal speed, 8 cm)
[6]: SACD Hybrid disc (CD layer, double speed, 8 cm)

### 2-2. Servo Control

**Note:** Be sure to perform the disc type setup before performing this item.

```
            Servo Control
  1.LD          off R.Sled FWD
  2.Focus       off L.Sled REV
  3.SPDL        off U.Sled Reset
  4.CLVA        off D.Sled Limit
  5.Trk.        off
  6.Sled        off
  7.Fcs.Srch    off


  0.All Servo Off

                        Exit: RETURN
```

On this screen, the servo on/off control necessary for replay is executed. Normally, turn on each servo from 1 sequentially and when CLVA is turned on, the usual trace mode becomes active. In the trace mode, DVD sector address or CD time code is displayed. This is not displayed where the spindle is not locked.
The spindle could run overriding the control if the spindle system is faulty or RF is not present. In such a case, do not operate CLVA.

[1] LD : Turn on/off the laser.
[2] Focus : Search the focus and turn on the focus.
[3] SPDL : Turn on/off the spindle.
[4] CLVA : Turn on/off normal servo of spindle servo.
[5] Trk. : Turn on/off the tracking servo.
[6] Sled : Turn on/off the sled servo.
[7] FCS. Srch : Turn on/off the focus search.
[8] FCS. OppL : Turn on/off the focus search to another layer of designated layer in Disc Type setting. (dual layer disc only)
[0] : All servo off.
→[R] Sled FWD (right cursor) : Move the sled forward.
←[L] Sled REV (left cursor) : Move the sled reverse.
↑[U] Sled FWD (up cursor) : Reset the sled.
↓[D] Sled REV (down cursor) : Limit in the sled.

### 2-3. Track/Layer Jump

```
          Track/Layer Jump
1.  1Tj         FWD R.Lj L0>L1
2.  1Tj         REV L.Lj L1>L0
3.500Tj Fine    FWD U.Fj L0>L1
4.500Tj Fine    REV D.Fj L1>L0
5.10kTj Dirc    FWD
6.10kTj Dirc    REV
7.20kTj Dirc    FWD
8.20kTj Dirc    REV

0. All Servo Off

                          Exit: RETURN
```

On this screen, track jump, etc. can be performed. Only for the DVD dual layer disc, the focus jump and layer jump are displayed in the right field

- [1] 1Tj FWD : 1 track jump forward.
- [2] 1Tj REV : 1 track jump reverse.
- [3] 500Tj FWD: 500 track jump (fine search)forward.
- [4] 500Tj REV : 500 track jump (fine search) reverse.
- [5] 10kTj FWD: 10k track jump (direct search) forward.
- [6] 10kTj REV : 10k track jump (direct search) reverse.
- [7] 20kTj FWD: 20k track jump (direct search) forward.
- [8] 20kTj REV : 20k track jump (direct search) reverse.
- [0] : All servo off.

### 2-4. Non EEPROM Write Adjust

```
      Non EEPROM Write Adjust

1. Focus Offset
2. Focus Gain
3. Trk.  Offset Coarse
4. Trk.  Offset Fine
5. Trk.  Gain
6. EQ    Boost

0.All Servo Off


                          Exit: RETURN
```

On this screen, each item can be adjusted manually. Select the desired number [1] to [0] from the remote commander, and current setting for the selected item will be displayed, then increase or decrease numeric value with the [↑] key or [↓] key. This value is stored in the EEPROM. If CLV has been applied, the jitter is displayed for reference for the adjustment.

- [1] Focus Offset : Adjusts focus offset.
- [2] Focus Gain : Adjusts focus gain.
- [3] TRK. Offset : Adjusts tracking offset of the RF amp (IC001) side.
- [4] TRK. Offset : Adjusts tracking offset of the DSP (IC401) side.
- [5] TRK. Gain : Adjusts track gain.
- [6] EQ Boost : Adjusts amount of boost of equalizer.
- [0] : All servo off.

### 2-5. EEPROM Write Adjust

```
        EEPROM Write Adjust

1. Focus  Offset
2. Focus  Gain
3. Trk.   Offset Coarse
4. ------
5. Trk.   Gain
6. EQ     Boost

0.All Servo Off


                          Exit: RETURN
```

On this screen, each item can be adjusted automatically. Select the desired number [1] to [0] from the remote commander, and selected item is adjusted automatically.

- [1] Focus Offset : Adjusts focus offset.
- [2] Focus Gain : Adjusts focus gain.
- [3] TRK. Offset : Adjusts tracking offset of the RF amp (IC001) side.
- [5] TRK. Gain : Adjusts track gain.
- [6] EQ Boost : Adjusts amount of boost of equalizer.
- [0] : All servo off.

### 2-6. Memory Check

Display images are shown as follows, and all two screens are able to switch by the [↑] key (UP) or [↓] key (DW).

```
EEPROM Data 1/2   CD  SL  L0  L1
Focus  Gain       xx  xx  xx  xx
Trk.   Gain       xx  xx  xx  xx
Focus  Offset     xx  xx  xx  xx
Trk.   Offset     xx  xx  xx  xx
EQ.    Boost      xx  xx  xx  xx
PI     Level      xx  xx  --  --
Fcs. Balance      --  xx  --  --
Jitter            xx  xx  xx  xx
Mirror Time       xx  xx  xx  --
FE Level          --  xx  --  --
Traverse Lv1.     --  xx  --  --
Next:DW Default:CLR    Exit:RET
```

```
EEPROM Data 2/2    CDRW DVDRW
Focus  Gain          xx    xx
Trk.   Gain          xx    xx
Focus  Offset        xx    xx
Trk.   Offset        xx    xx
EQ.    Boost         xx    xx




Prev:UP Default:CLR       Exit:RET
```

On this screen, current servo adjusted data stored in the EEPROM are displayed. The adjusted data are initialized by pressing the [CLEAR] key, but be careful that they are not recoverable after initialization.

Before clearing the adjusted data, make a note of the set data. This screen will also appear if [0]-All is selected in the Drive Auto Adjustment. In this case, default setting cannot be made.

### 2-7. Disc Check Memory

```
        Disc Check Memory

 1. SL Disc check
 2. CD Disc check
 3. DL Disc check




                        Exit: RETURN
```

On this screen, measure the mirror time of chucked disc, and write to the EEPROM.

### 2-8. Error Rate Display

```
         Error Rate Display
             UC   CR  Address
PI1 Err  Now xx xxxx xxxxxxxx
         Max xx xxxx xxxxxxxx
         Avg xx xxxx
PI2 Err  Now xx xxxx xxxxxxxx
         Max xx xxxx xxxxxxxx
         Avg xx xxxx
PO  Err  Now xx xxxx xxxxxxxx
         Max xx xxxx xxxxxxxx
         Avg xx xxxx

 Start:ENTER             Exit: RETURN
```

On this screen, measure and display the error rate.

UC : Incorrect value
CR : Correct value

### 2-9. SACD Water Mark Check

```
 SACD Water Mark Check



  PSP AMP
  PSN




  Start: ENTER          Exit: RETURN
```

On this screen, measure the PSP AMP value and PSN value of SACD water mark.

## 3. EMERGENCY HISTORY

On the Test Mode Menu screen, selecting [4] displays the information such as servo emergency history.
The history information from last 1 up to 10 can be scrolled with the [↑] key or [↓] key. Also, specific information can be displayed by directly entering that number with ten keys.

```
        ### EMG. History ###

  Laser Hours     CD  xxxxhxxm
                  DVD xxxxhxxm

a.   bb xx xx xx  xx xx xx xx
     xx xx xx xx  xx xx xx xx

a.   bb xx xx xx  xx xx xx xx
     xx xx xx xx  xx xx xx xx

   Select:1-9         Scroll:UP/DOWN
  (1.Latest EMG.)      Exit: RETURN
```

xxxxhxxm : The laser on total hours. Data below minutes are omitted.
a. : Error number.
bb : Error code.
xx : Not used.

- Clearing History Information

**Clearing laser hours:**
Press the [DVD DISPLAY] and [CLEAR] keys in this order.
Then both CD and DVD data are cleared.

**Clearing emergency history:**
Press the [DVD TOP MENU] and [CLEAR] keys in this order.

**Initializing set up data:**
Press [DVD MENU] and [CLEAR] keys in this order.
The data have been initialized when “EEPROM Initialize Finished.”. message is displayed. The EMG. History screen will be restored soon.

- Code list of Emergency History

10: Communication to RF AMP (IC001) failed.
11: Each servo for focus, tracking, and spindle is unlocked.
12: Check sum error of EEPROM (IC203).
14: Communication to servo DSP (IC401) failed, or servo DSP (IC401) is faulty.
15: Communication to DVD decoder (IC701) failed, or DVD decoder (IC701) is faulty.
16: Communication to DSD decoder (IC801) failed, or DSD decoder (IC801) is faulty.
20: Initialization of sled servo failed. It is not placed in the initial position.
23: Sled servo operation error.
24: Made a request to move the sled servo to wrong position.
30: Tracking balance adjustment error.
31: Tracking gain adjustment error.
33: Focus bias adjustment error.
34: Focus gain adjustment error.
35: Equalizer adjustment error.
40: Focus servo does not operate.
41: With a DVD dual layer disc, focus jump failed.
50: CLV (spindle) servo does not operate.
51: Spindle does not stop.
60: Made a request to seek nonexistent address.
61: Seek error of retry more than regulated times.
70: Control data could not be read.
80: Disc reading failed.

## 4. MECHA ERROR HISTORY

On the Test Mode Menu screen, selecting [5] displays the information of mechanism deck error history.
The history information from last 1 up to 8 can be scrolled with the [↑] key or [↓] key. Also, specific information can be displayed by directly entering that number with ten keys.

```
    ### Mecha Error History ###

  1. aa bb cc dd xx xx xx xx
  2. aa bb cc dd xx xx xx xx
  3. aa bb cc dd xx xx xx xx
  4. aa bb cc dd xx xx xx xx
  5. aa bb cc dd xx xx xx xx
  6. aa bb cc dd xx xx xx xx
  7. aa bb cc dd xx xx xx xx
  8. aa bb cc dd xx xx xx xx

                     Scroll:UP/DOWN
(1.Latest Err.)       Exit: RETURN
```

aa : The error in the midst of initializing the mechanism deck.
bb : The error in the midst of loading operation.
cc : The error in the midst of up/down the stocker.
dd : The error in the midst of switching the mechanism deck mode.
xx : Not used.

• Error code (aa)
FF : Complete the initializing. (normal operation)
11 : Stocker movement (to chucking position) failing in the midst of initializing the mechanism deck.
12 : Stocker movement (to chucking position) failing in the midst of initializing the mechanism deck.
1x : Initializing the mechanism deck.
2x : Initializing the mechanism deck.
3x : Initializing the mechanism deck.
41 : Disc eject failing in the midst of initializing the mechanism deck.
4x : Initializing the mechanism deck.
50 : Disc eject failing in the midst of initializing the mechanism deck.
5x : Initializing the mechanism deck.
A2 : Disc eject failing in the midst of initializing the mechanism deck.
Ax : Initializing the mechanism deck.
D3 : Disc eject failing in the midst of initializing the mechanism deck.
Dx : Initializing the mechanism deck.
Ex : Initializing the mechanism deck.

• Error code (bb)
00 : Initializing the mechanism deck.
10 : Retry over of eject and loading.
30 : Open operation in no disc status.
60 : Retry over of eject and loading.
70 : Disc is chucking position.
81 : Retry failed of disc movement from chucking position to stocker.
83 : Retry preparation failed of disc movement from chucking position to stocker.
90 : Disc is stored in the stocker.
A1 : Retry failed of disc movement from stocker to chucking position.
A3 : Retry preparation failed of disc movement from stocker to chucking position.
B0 : Just before the release operation.
B1 : Retry failed of the release operation.

• Error code (cc)
10 : Under a stop.
22 : Retry preparation failed.
23 : Retry failed.

• Error code (dd)
10 : Under a stop.
22 : Retry preparation failed.
23 : Retry failed.

## 5. VERSION INFORMATION

On the Test Mode Menu screen, selecting [6] displays the ROM version and region code.
The parenthesized hexadecimal number in version field is checksum value of ROM.

```
    ## Version Information ##

IF con.   Ver.x. xx

SYScon.   Ver.x. xx  (xxxx)
      Model      DAV-xxx
      Region     0x
      Config     xxxxxxxx

Front End Ver.x.xx


                       Exit: RETURN
```

IF con. : The version of system controller (IC901).
SYScon. : The version of DVD system processor (IC206).
Front End: The version of mechanism controller (IC301).

## 6. VIDEO LEVEL ADJUSTMENT

On the Test Mode Menu screen, selecting [7] displays color bars for video level adjustment. During display of color bars, OSD disappears but the menu screen will be restored if pressing the [RETURN] key.

# SECTION 2
# ELECTRICAL ADJUSTMENT

## [TEST DISC LIST]

Use the following test disc on test mode.

TDV-520CSO (DVD-SL) : PART No. J-2501-236-A
LUV-P01 (CD) : PART No. 4-999-032-01
TDV-540C (DVD-DL) : PART No. J-2501-235-A

**Note:** Do not use exiting test disc for DVD.

## AUTO SERVO ADJUSTMENT

After parts related to the servo circuit (RF amplifier (IC001), DSP (IC401), motor driver (IC501), EEPROM (IC302) so on) and optical pick-up (DBU-1) are replaced, re-adjusting the servo circuit is necessary. Select “ALL” at “1. DRIVE AUTO ADJUSTMENT” (Refer to page 4 in TEST MODE) and adjust DVD-SL (single layer), CD and DVD-DL (dual layer).

# HCD-FR1/FR8/FR9

SONY

US Model
HCD-FR1/FR8/FR9
Canadian Model
HCD-FR1

# SERVICE MANUAL

**Ver 1.2 2004.08**

## SUPPLEMENT-2

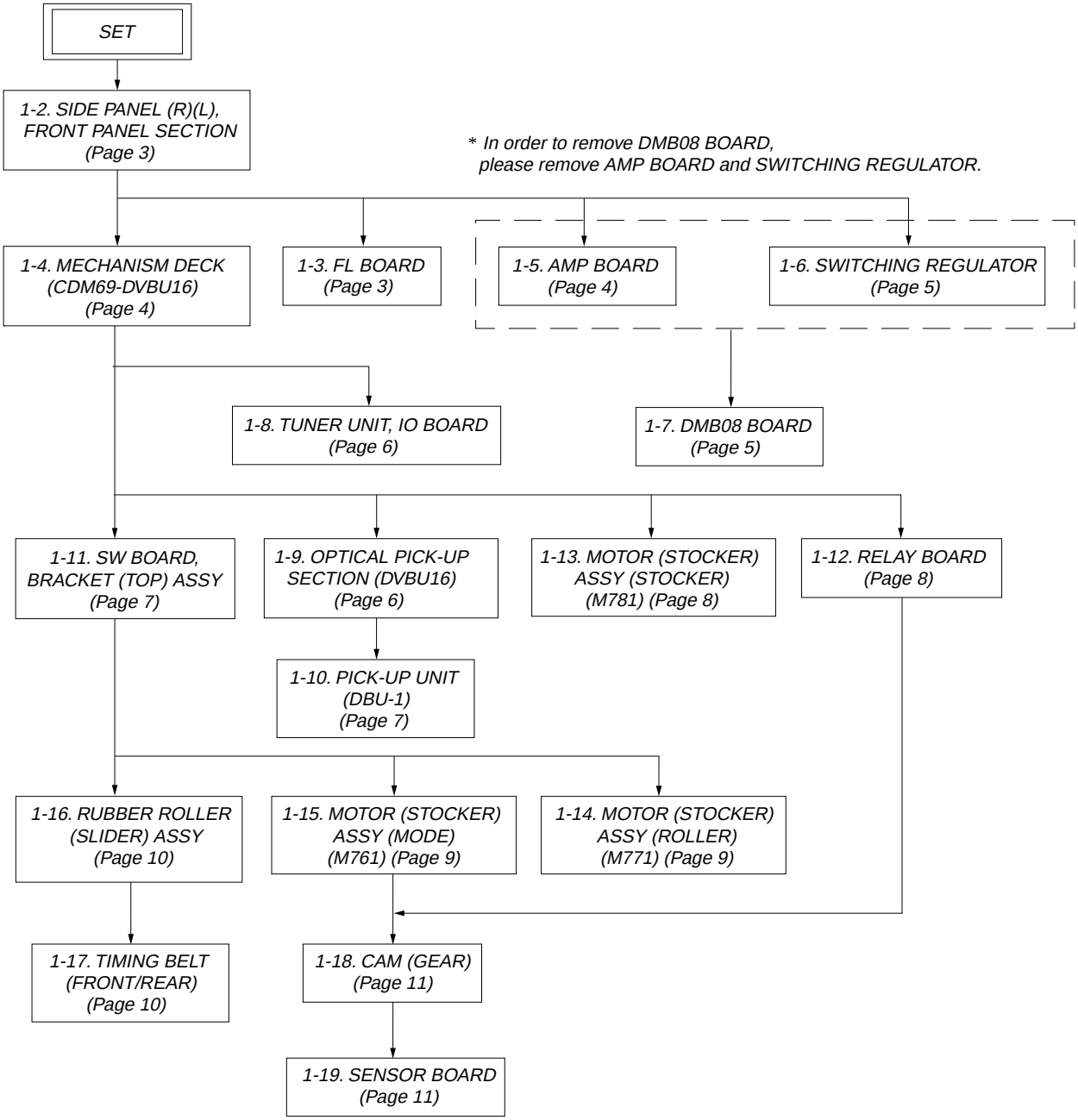
**Subject : DISASSEMBLY, ASSEMBLY, Block Diagram, IC Block Diagrams, and IC Pin Function Description**

9-879-011-82

# SECTION 1
# DISASSEMBLY

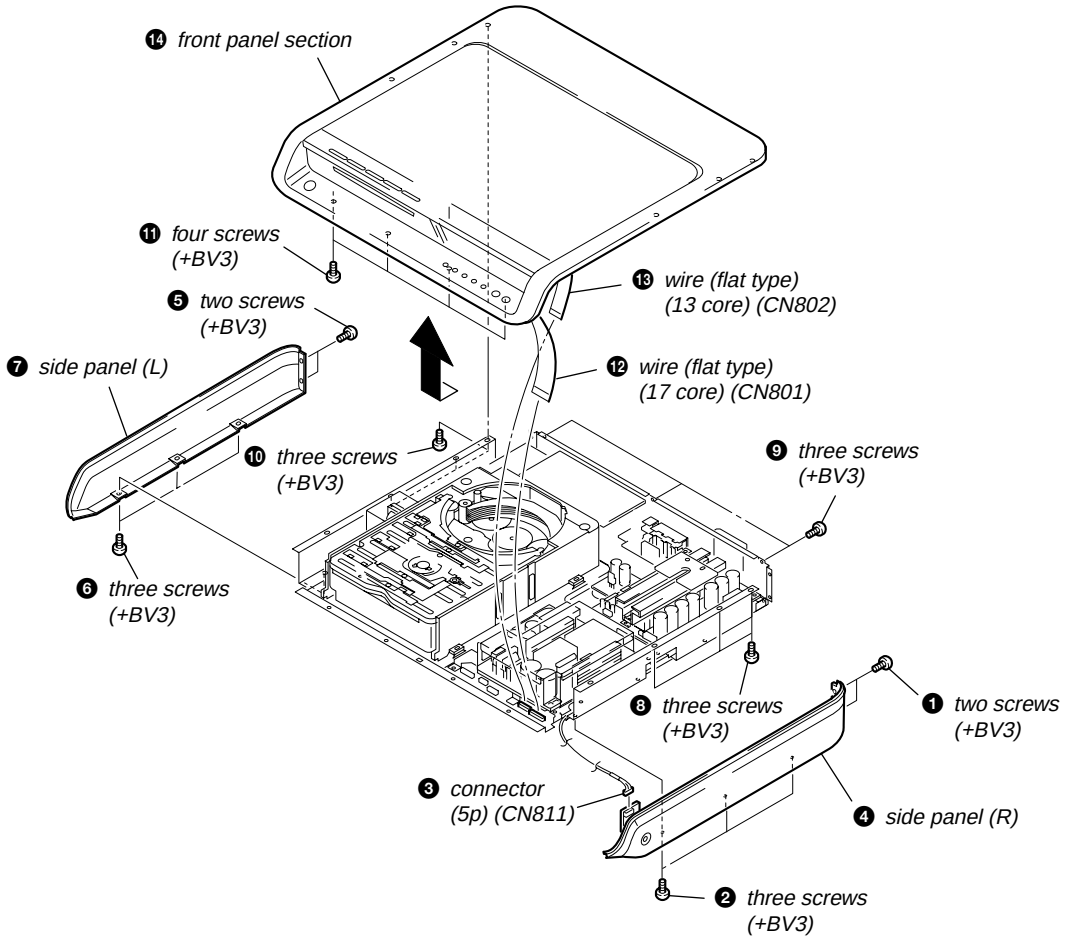
• This set can be disassembled in the order shown below.

## 1-1. FLOW CHART

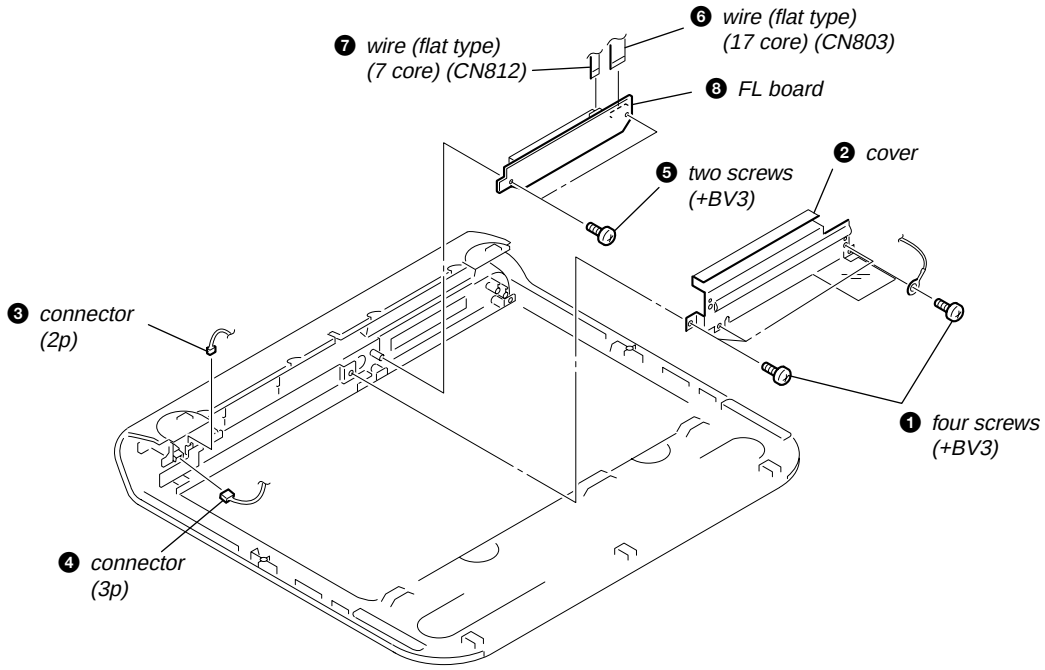

SET
1-2. SIDE PANEL (R)(L), FRONT PANEL SECTION (Page 3)
* In order to remove DMB08 BOARD, please remove AMP BOARD and SWITCHING REGULATOR.
1-4. MECHANISM DECK (CDM69-DVBU16) (Page 4)
1-3. FL BOARD (Page 3)
1-5. AMP BOARD (Page 4)
1-6. SWITCHING REGULATOR (Page 5)
1-8. TUNER UNIT, IO BOARD (Page 6)
1-7. DMB08 BOARD (Page 5)
1-11. SW BOARD, BRACKET (TOP) ASSY (Page 7)
1-9. OPTICAL PICK-UP SECTION (DVBU16) (Page 6)
1-13. MOTOR (STOCKER) ASSY (STOCKER) (M781) (Page 8)
1-12. RELAY BOARD (Page 8)
1-10. PICK-UP UNIT (DBU-1) (Page 7)
1-16. RUBBER ROLLER (SLIDER) ASSY (Page 10)
1-15. MOTOR (STOCKER) ASSY (MODE) (M761) (Page 9)
1-14. MOTOR (STOCKER) ASSY (ROLLER) (M771) (Page 9)
1-17. TIMING BELT (FRONT/REAR) (Page 10)
1-18. CAM (GEAR) (Page 11)
1-19. SENSOR BOARD (Page 11)

**Note:** Follow the disassembly procedure in the numerical order given.

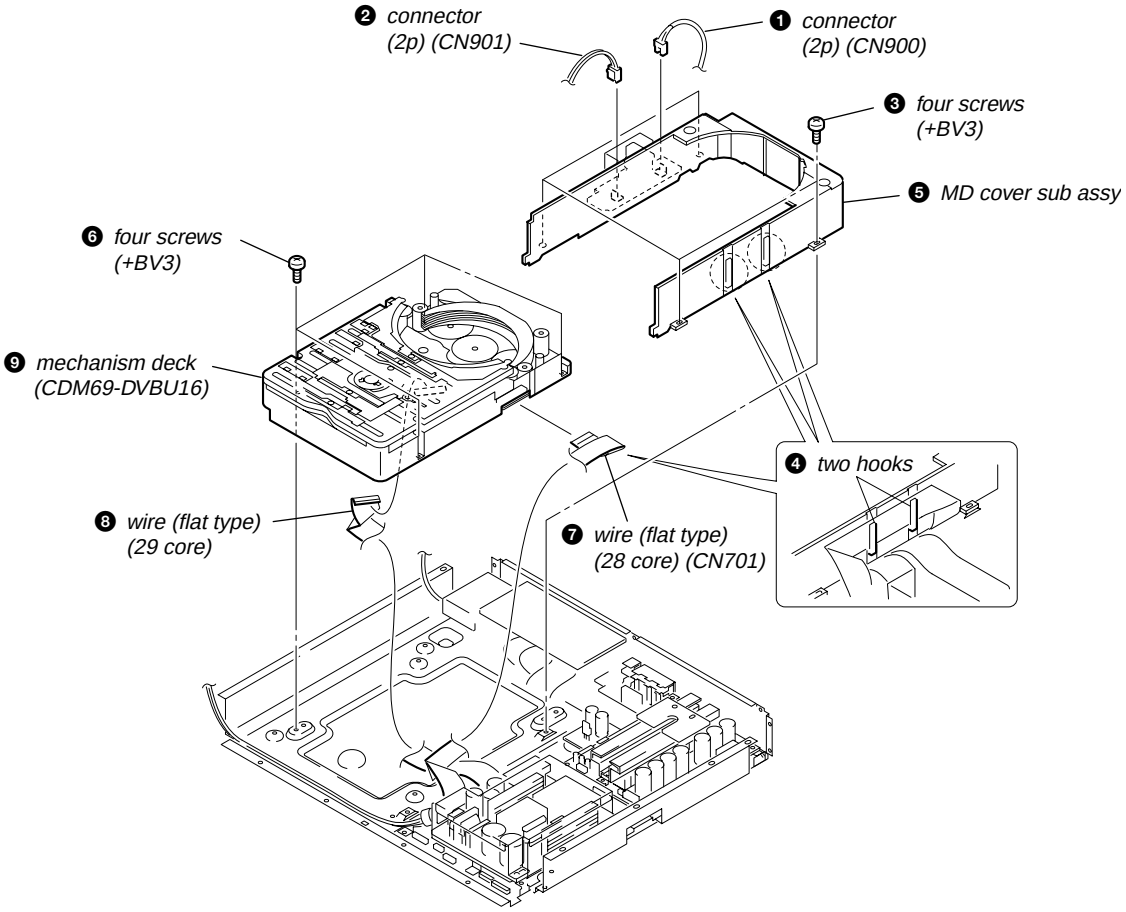
## 1-2. SIDE PANEL (R)(L), FRONT PANEL SECTION


⓮ front panel section
⓫ four screws (+BV3)
❺ two screws (+BV3)
❼ side panel (L)
⓭ wire (flat type) (13 core) (CN802)
⓬ wire (flat type) (17 core) (CN801)
❿ three screws (+BV3)
❾ three screws (+BV3)
❻ three screws (+BV3)
❽ three screws (+BV3)
❶ two screws (+BV3)
❸ connector (5p) (CN811)
❹ side panel (R)
❷ three screws (+BV3)

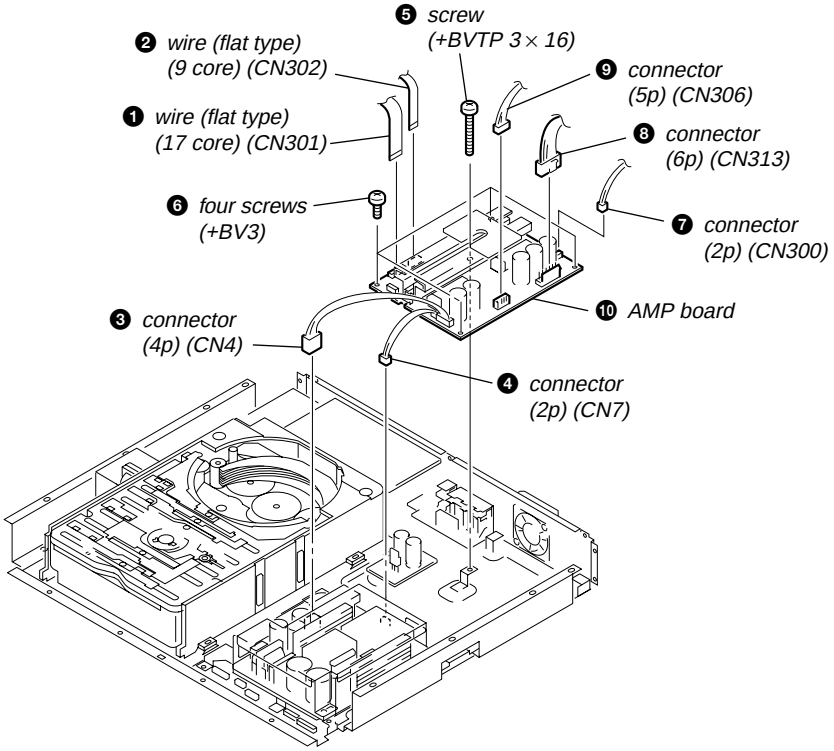
## 1-3. FL BOARD


❻ wire (flat type) (17 core) (CN803)
❼ wire (flat type) (7 core) (CN812)
❽ FL board
❷ cover
❺ two screws (+BV3)
❸ connector (2p)
❶ four screws (+BV3)
❹ connector (3p)

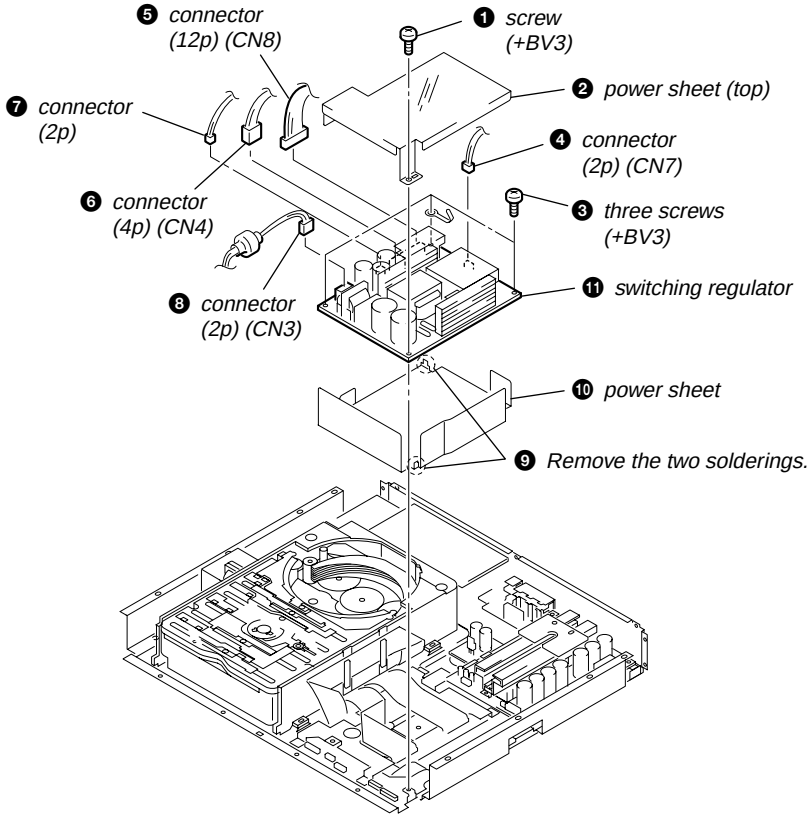
### 1-4. MECHANISM DECK (CDM69-DVBU16)


❷ connector (2p) (CN901)
❶ connector (2p) (CN900)
❸ four screws (+BV3)
❺ MD cover sub assy
❻ four screws (+BV3)
❾ mechanism deck (CDM69-DVBU16)
❹ two hooks
❽ wire (flat type) (29 core)
❼ wire (flat type) (28 core) (CN701)

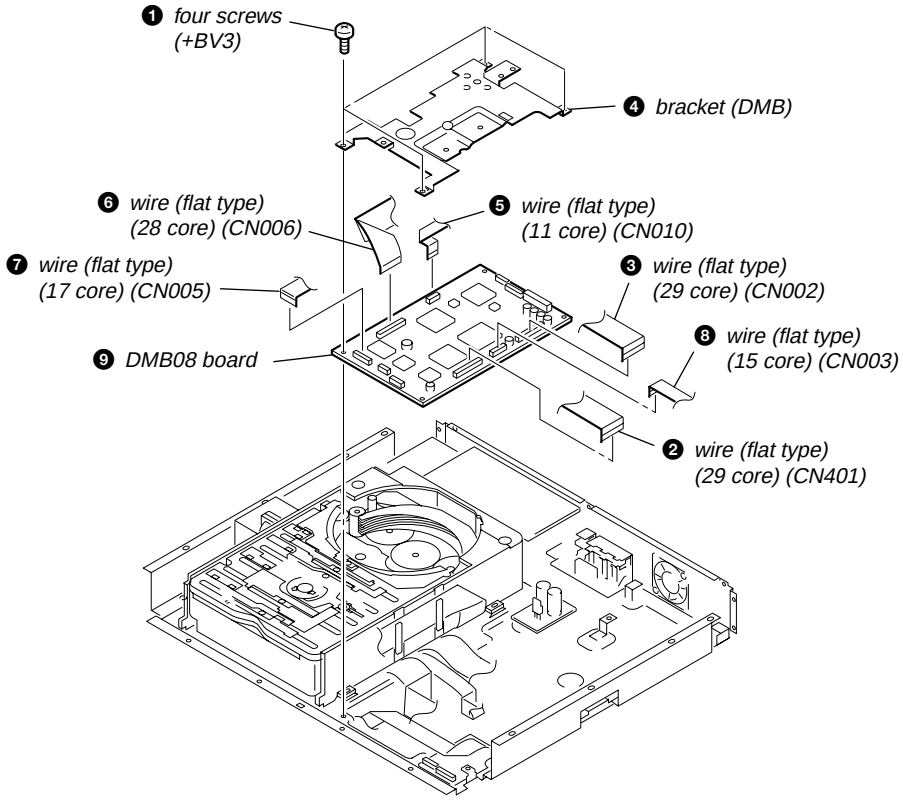
### 1-5. AMP BOARD


❺ screw (+BVTP 3 × 16)
❷ wire (flat type) (9 core) (CN302)
❾ connector (5p) (CN306)
❶ wire (flat type) (17 core) (CN301)
❽ connector (6p) (CN313)
❻ four screws (+BV3)
❼ connector (2p) (CN300)
❿ AMP board
❸ connector (4p) (CN4)
❹ connector (2p) (CN7)

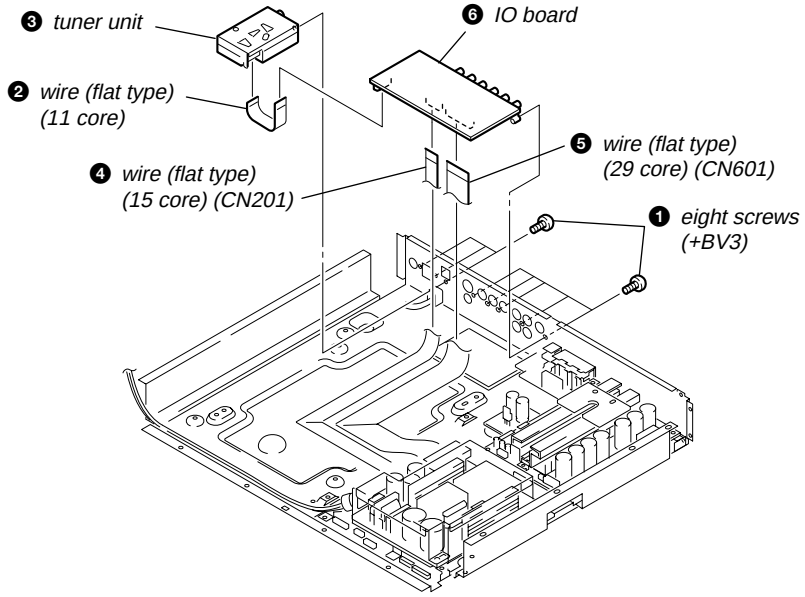
## 1-6. SWITCHING REGULATOR



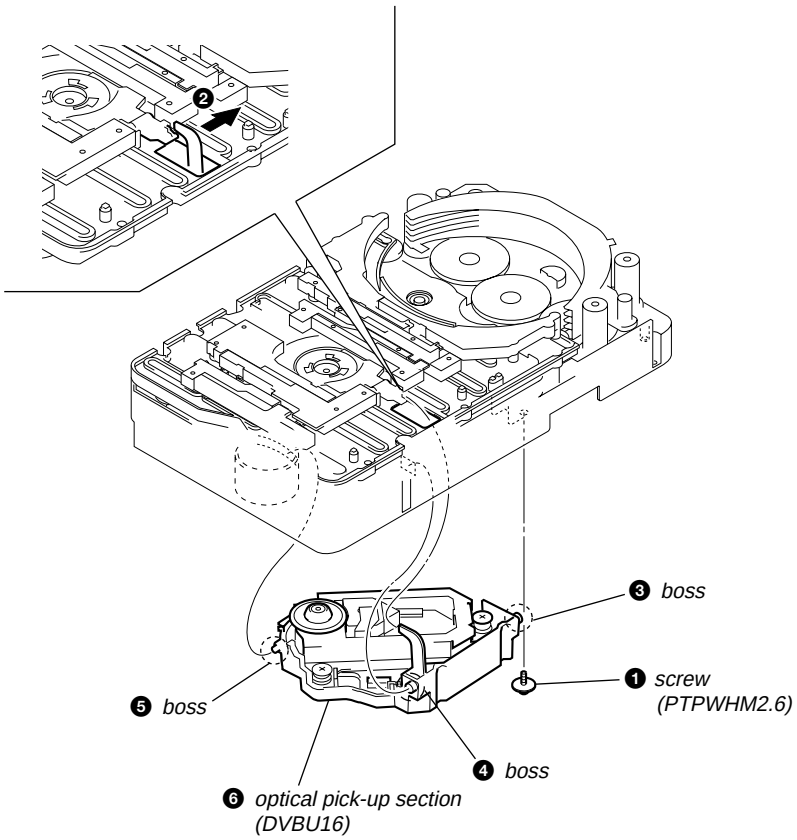

## 1-7. DMB08 BOARD


❶ four screws (+BV3)
❹ bracket (DMB)
❻ wire (flat type) (28 core) (CN006)
❺ wire (flat type) (11 core) (CN010)
❼ wire (flat type) (17 core) (CN005)
❸ wire (flat type) (29 core) (CN002)
❽ wire (flat type) (15 core) (CN003)
❾ DMB08 board
❷ wire (flat type) (29 core) (CN401)

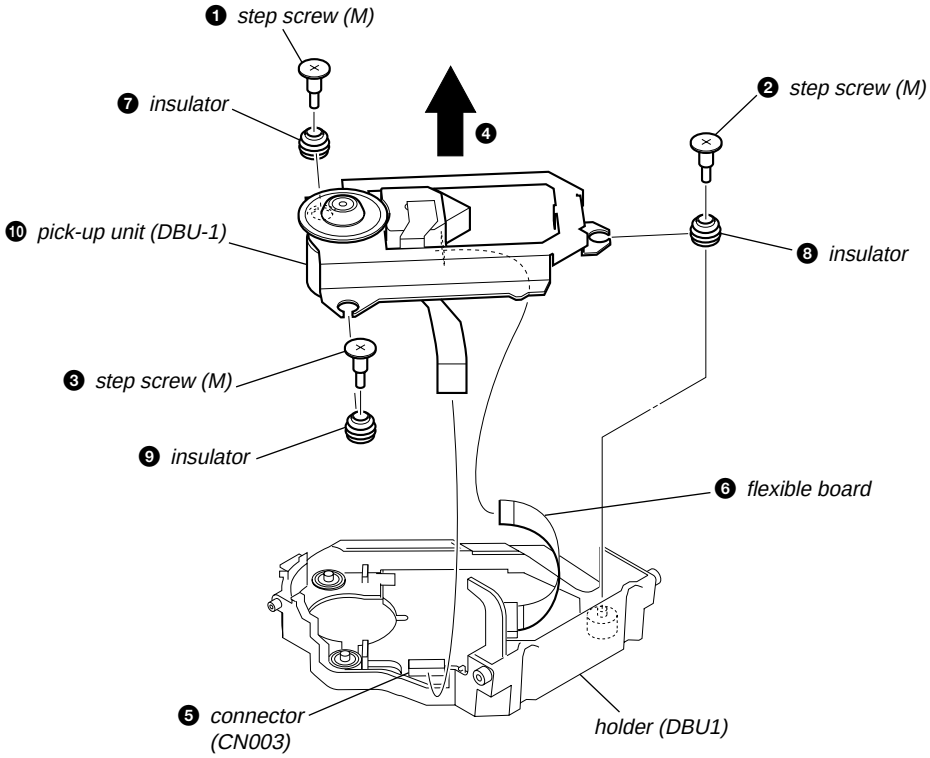
### 1-8. TUNER UNIT, IO BOARD



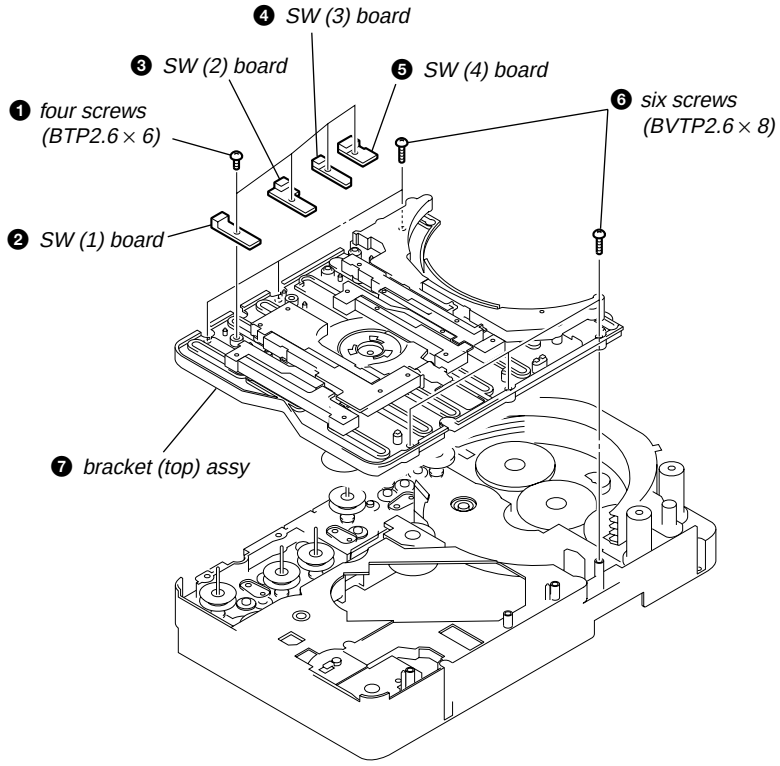

### 1-9. OPTICAL PICK-UP SECTION (DVBU16)



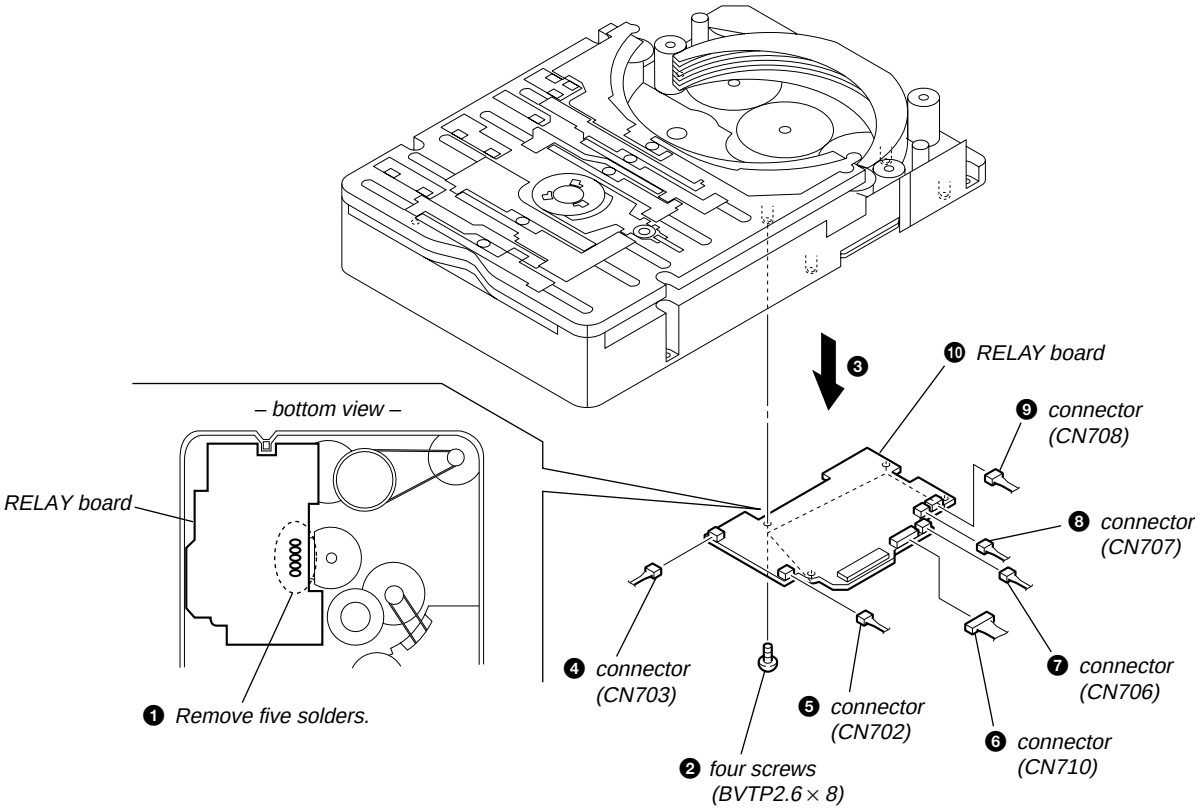
### 1-10. PICK-UP UNIT (DBU-1)



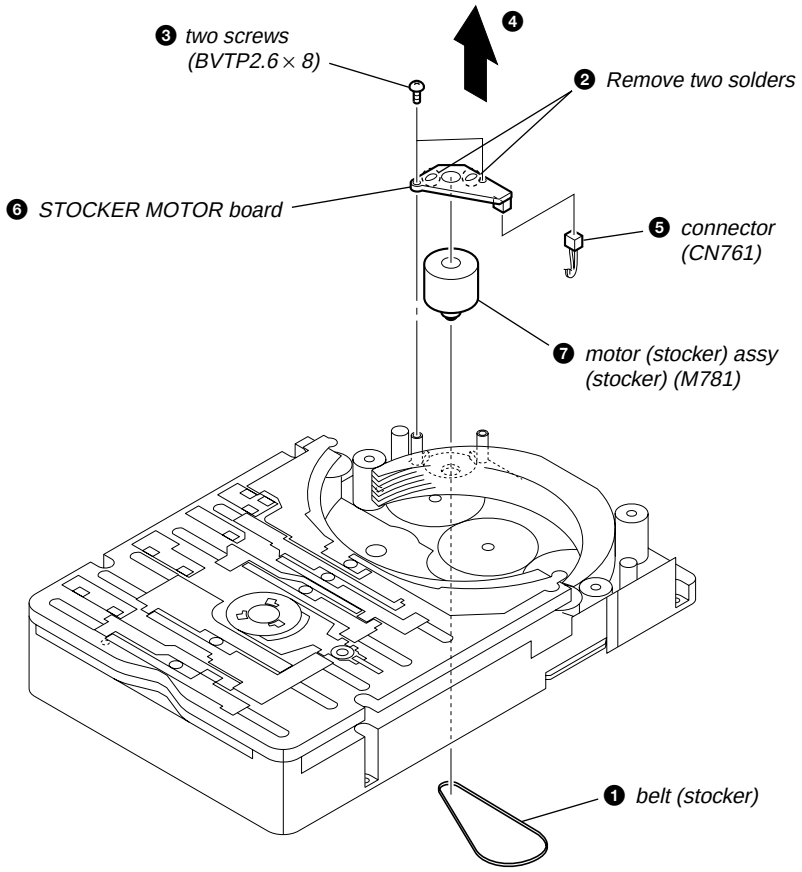

### 1-11. SW BOARD, BRACKET (TOP) ASSY



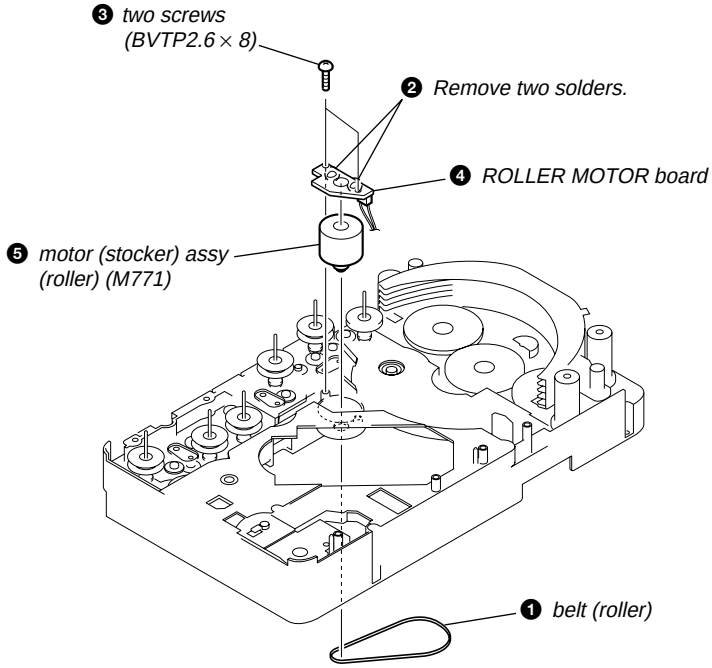
### 1-12. RELAY BOARD



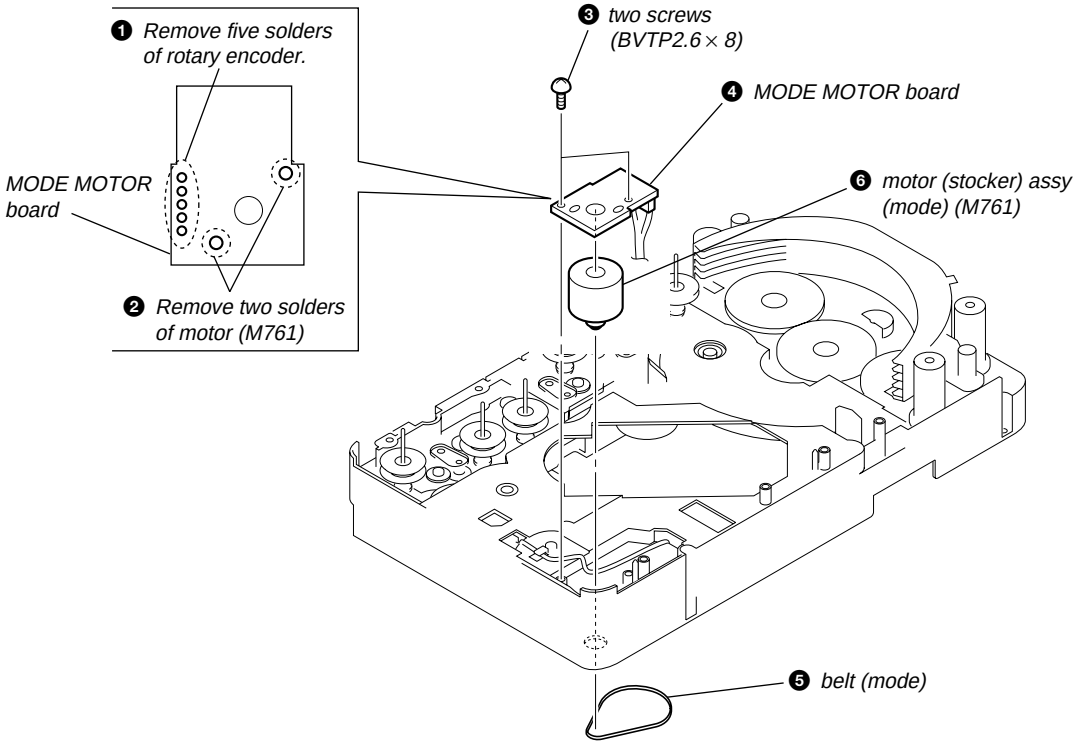

### 1-13. MOTOR (STOCKER) ASSY (STOCKER)(M781)



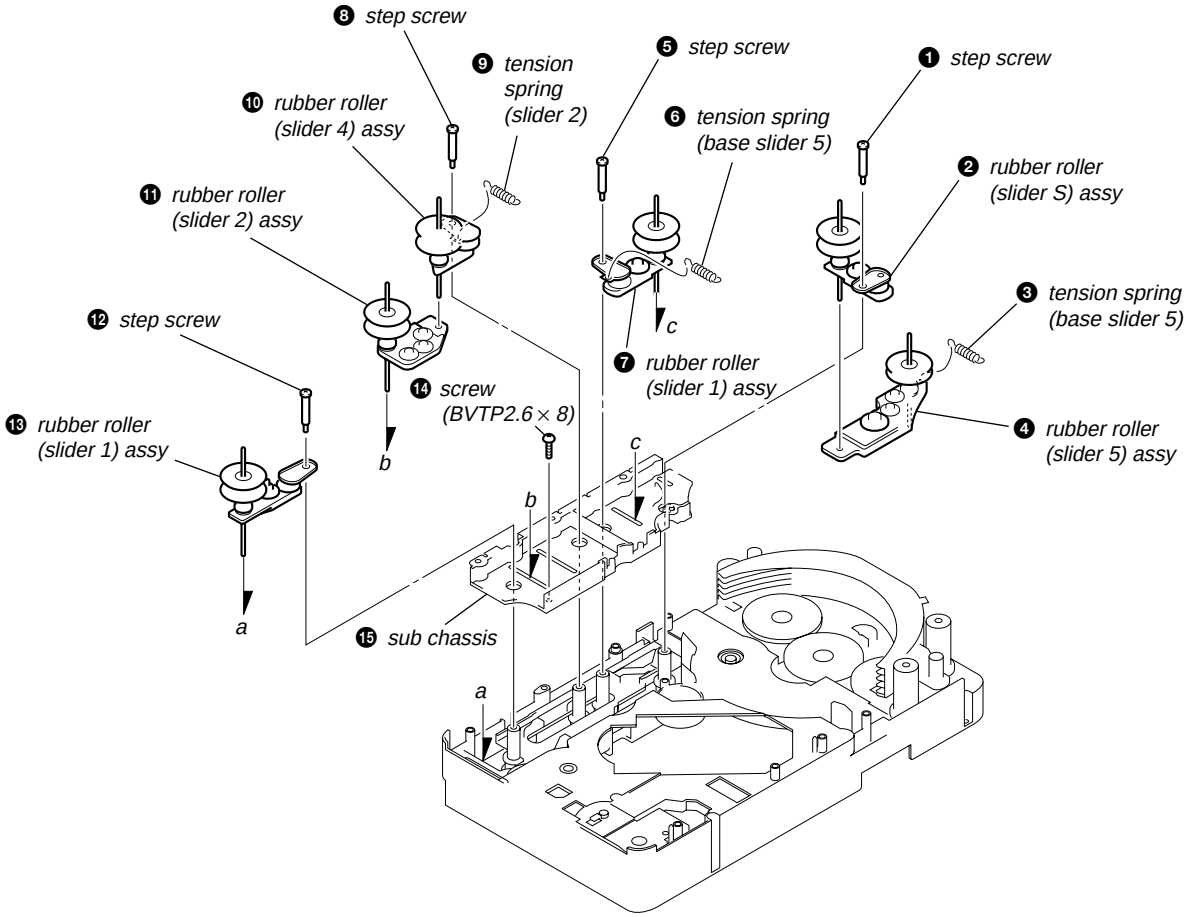
### 1-14. MOTOR (STOCKER) ASSY (ROLLER)(M771)



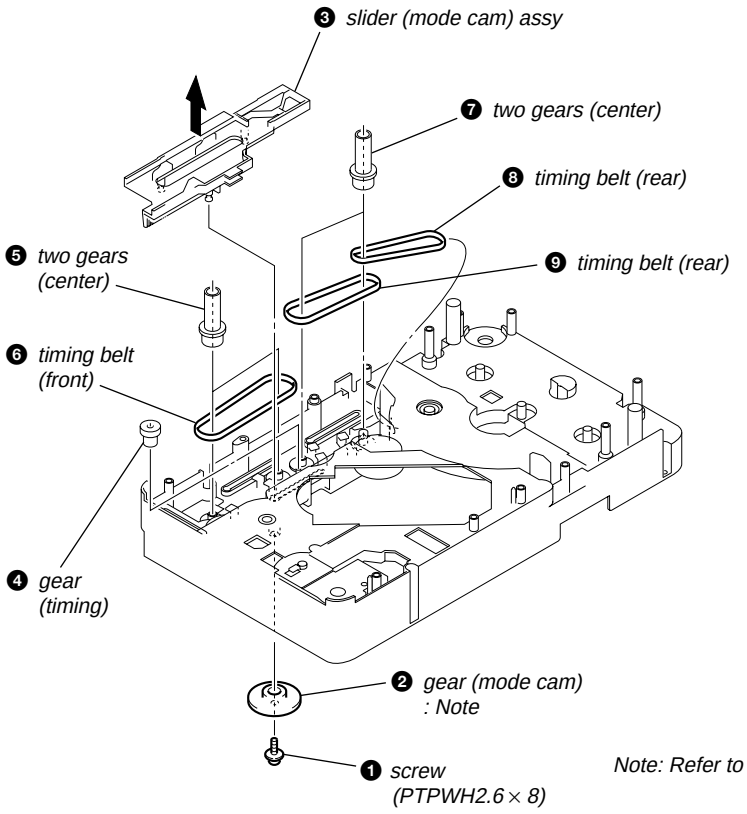

### 1-15. MOTOR (STOCKER) ASSY (MODE)(M761)

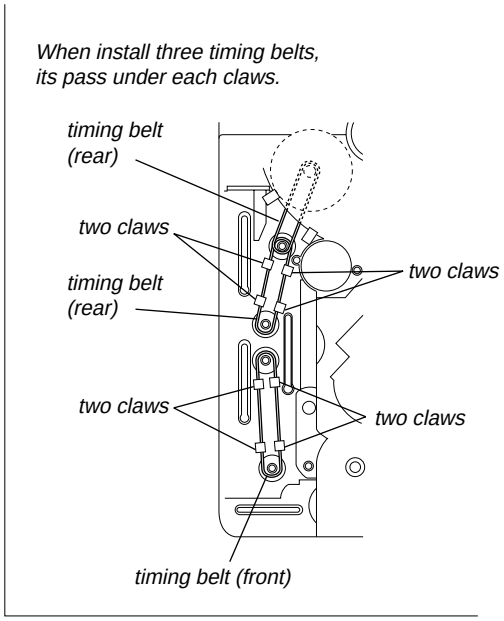


### 1-16. RUBBER ROLLER (SLIDER) ASSY



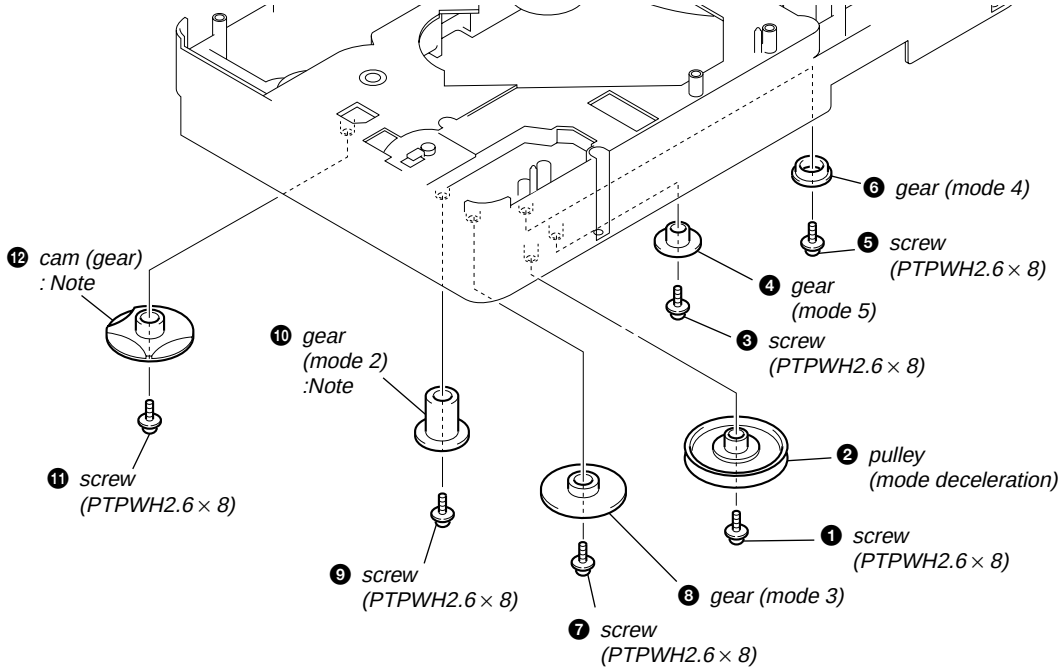

### 1-17. TIMING BELT (FRONT/REAR)


❸ slider (mode cam) assy
❼ two gears (center)
❽ timing belt (rear)
❺ two gears (center)
❾ timing belt (rear)
❻ timing belt (front)
❹ gear (timing)
❷ gear (mode cam) : Note
❶ screw (PTPWH2.6 × 8)



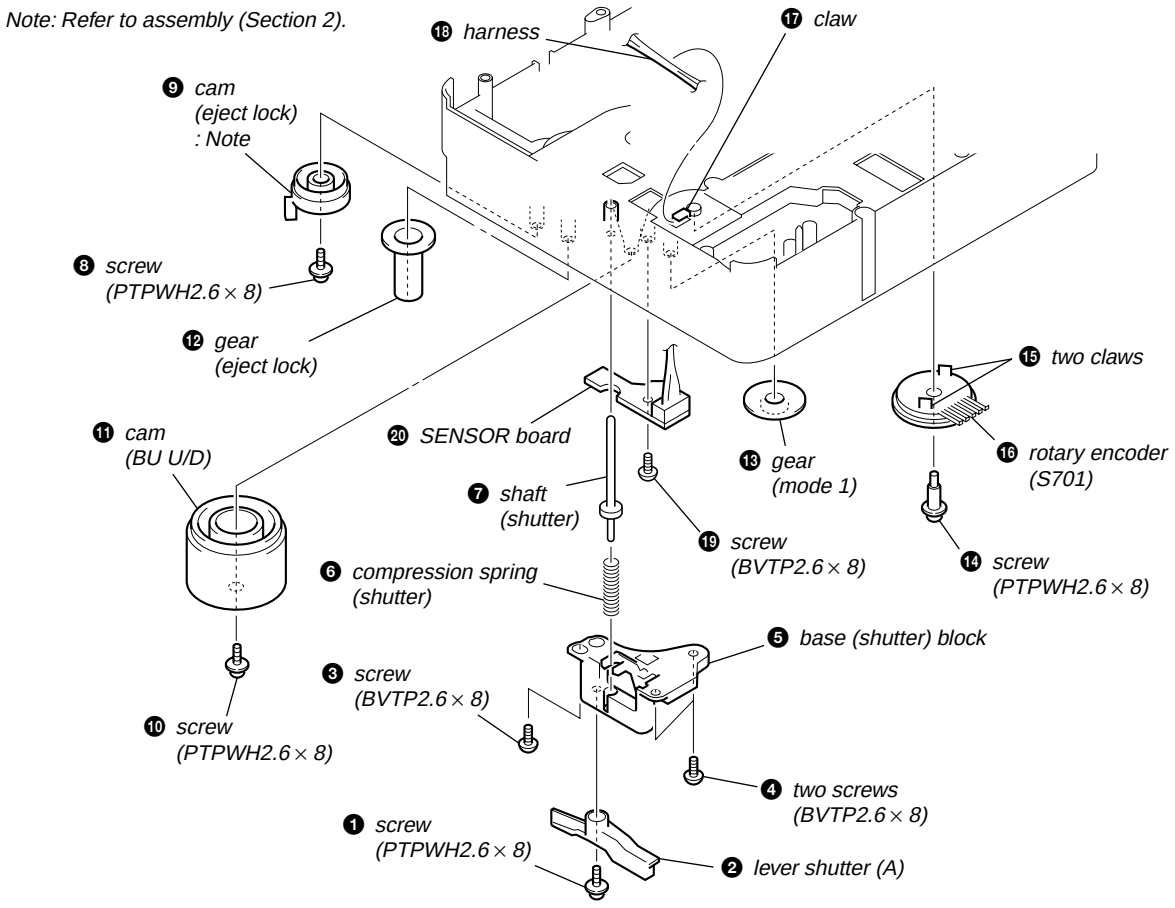

Note: Refer to assembly (Section 4)

### 1-18. CAM (GEAR)




*Note: Refer to assembly (Section 2).*

### 1-19. SENSOR BOARD

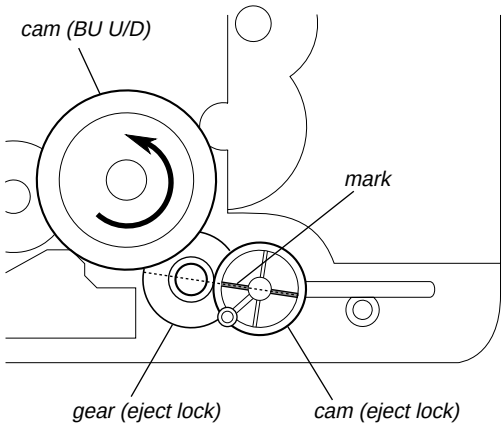


# SECTION 2
# ASSEMBLY

• This is can be assemble according to the following sequence.

## 2-1. HOW TO INSTALL THE CAM (EJECT LOCK)

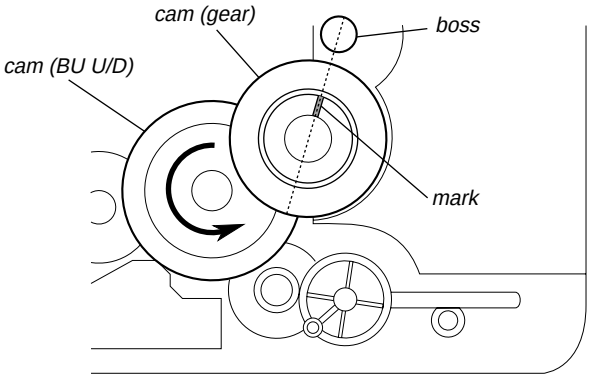
❶ *Rotate the cam (BU U/D) fully in the direction of arrow.*
❷ *Engage the gear (eject lock) and the gear of the cam (eject lock) aligning the mark with the center of the gear (eject lock).*




*– bottom view • front –*

## 2-2. HOW TO INSTALL THE CAM (GEAR)

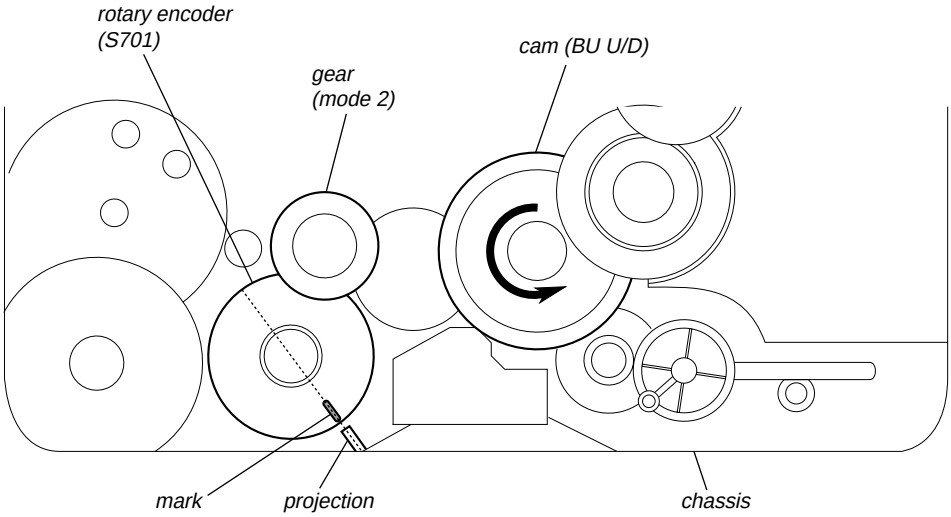
❶ *Check that the cam (BU U/D) can not be rotated in the direction of arrow.*
❷ *Align the mark on the cam (gear) with the boss as shown in the figure and install the cam (gear).*




*– bottom view • front –*

## 2-3. HOW TO INSTALL THE GEAR (MODE 2)

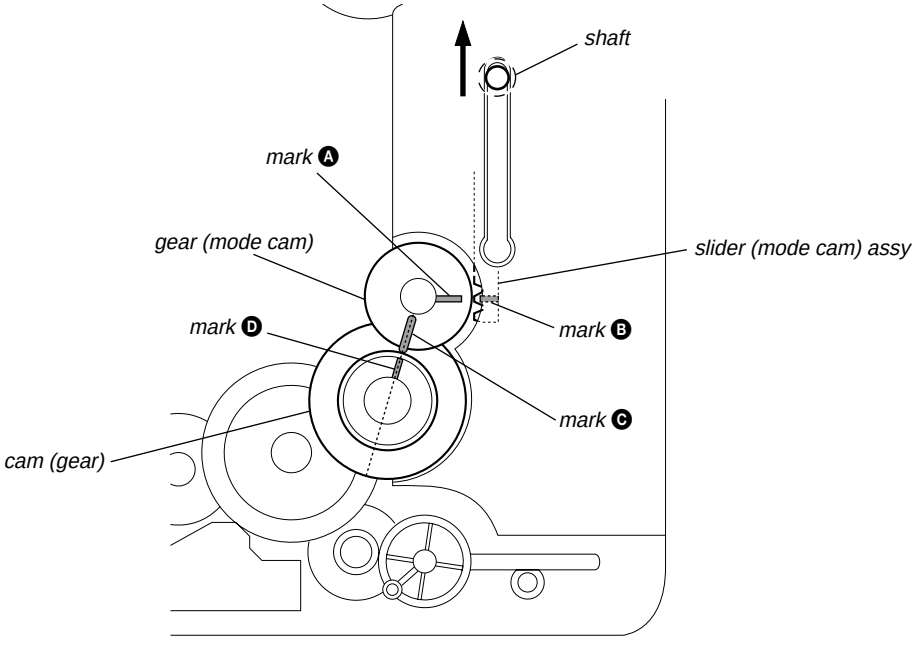
❶ *Align the mark on the rotary encoder (S701) with the projection of the assy.*
❷ *Check that the cam (BU U/D) can not be rotated in the direction of arrow.*
❸ *Install the gear (mode 2).*




*– bottom view • front –*

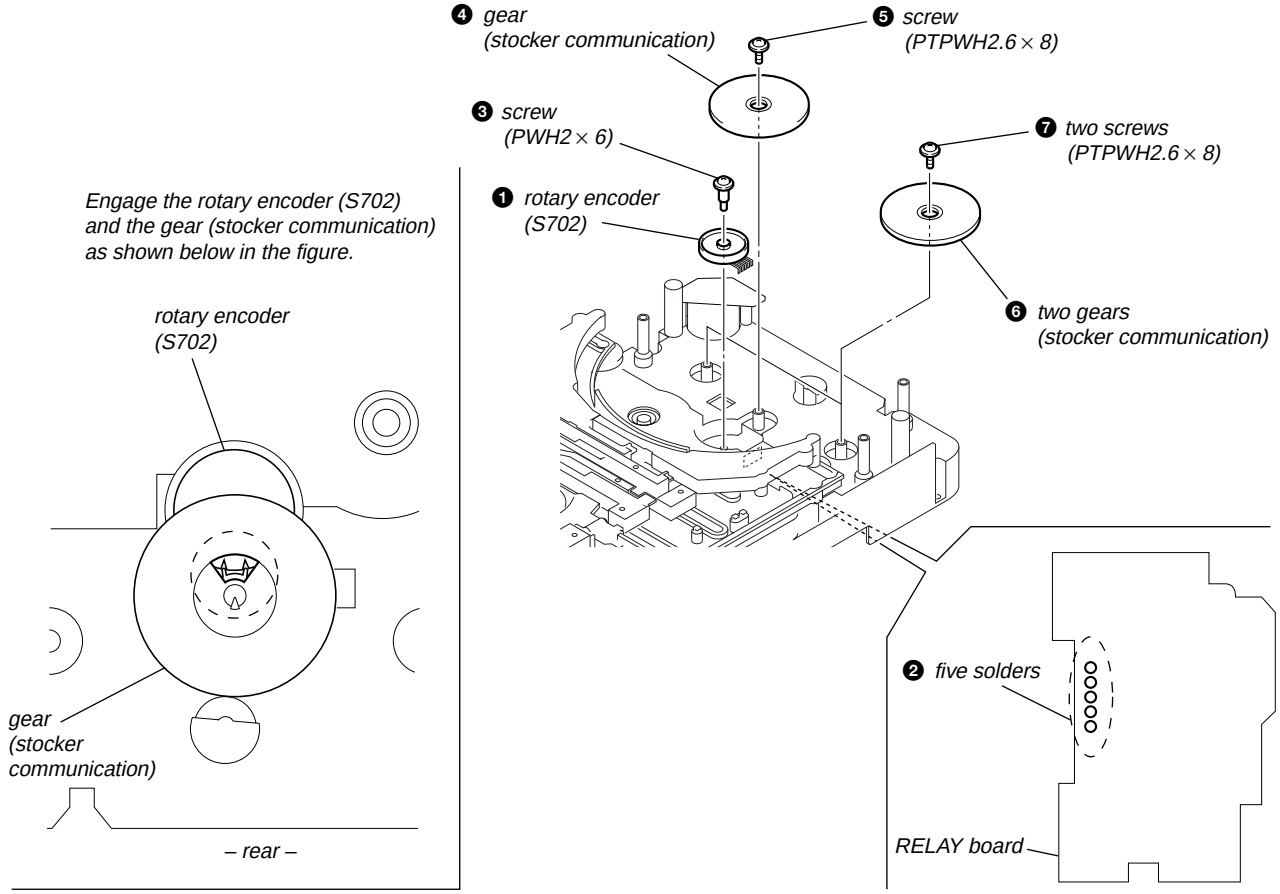
## 2-4. HOW TO INSTALL THE GEAR (MODE CAM)

❶ *Slide the shaft in the direction of arrow.*
❷ *Align mark Ⓐ on the gear (mode cam) with mark Ⓑ on the slider (mode cam) assy, then install the gear (mode cam).*
❸ *Check that mark Ⓒ on the gear (mode cam) is in alignment with mark Ⓓ on the cam (gear).*

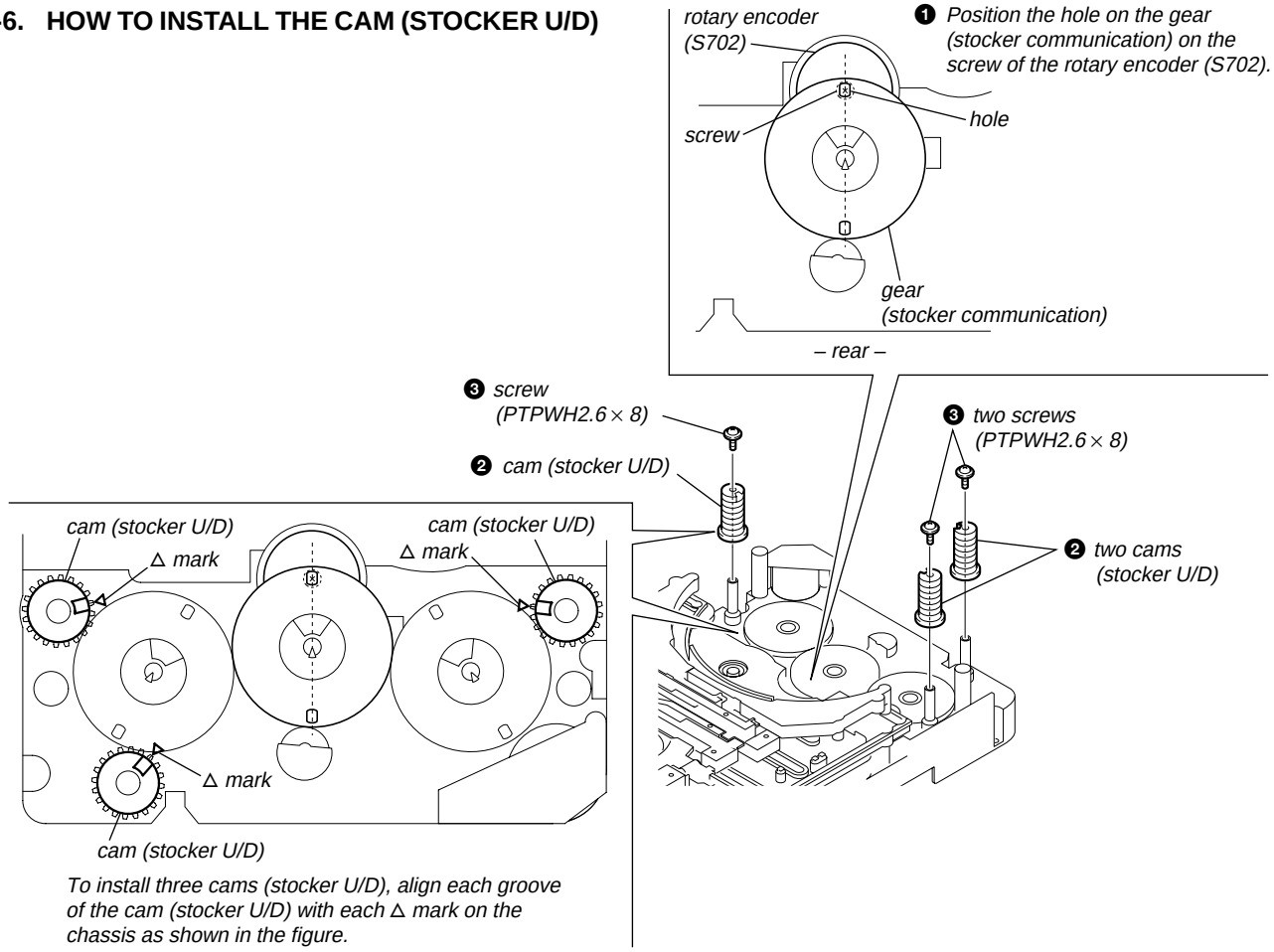



*– bottom view • front –*

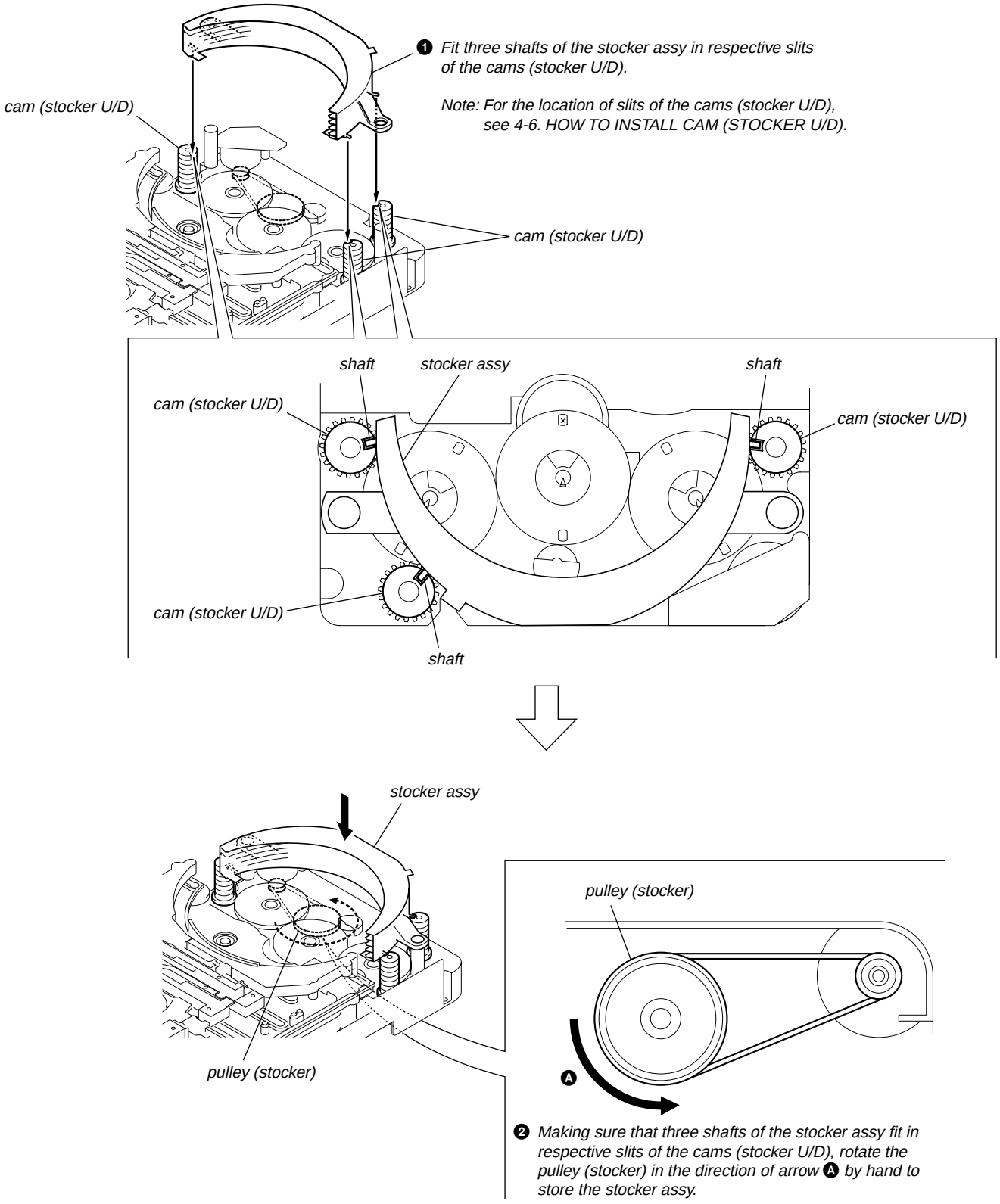
## 2-5. HOW TO INSTALL THE ROTARY ENCODER (S702), GEAR (STOCKER COMMUNICATION)


❹ gear (stocker communication)
❺ screw (PTPWH2.6 × 8)
❸ screw (PWH2 × 6)
❼ two screws (PTPWH2.6 × 8)
❶ rotary encoder (S702)
❻ two gears (stocker communication)
Engage the rotary encoder (S702) and the gear (stocker communication) as shown below in the figure.
rotary encoder (S702)
gear (stocker communication)
– rear –
❷ five solders
RELAY board

## 2-6. HOW TO INSTALL THE CAM (STOCKER U/D)


rotary encoder (S702)
❶ Position the hole on the gear (stocker communication) on the screw of the rotary encoder (S702).
screw
hole
gear (stocker communication)
– rear –
❸ screw (PTPWH2.6 × 8)
❷ cam (stocker U/D)
❸ two screws (PTPWH2.6 × 8)
❷ two cams (stocker U/D)
cam (stocker U/D)
△ mark
cam (stocker U/D)
△ mark
△ mark
cam (stocker U/D)
To install three cams (stocker U/D), align each groove of the cam (stocker U/D) with each △ mark on the chassis as shown in the figure.

## 2-7. HOW TO INSTALL THE STOCKER ASSY

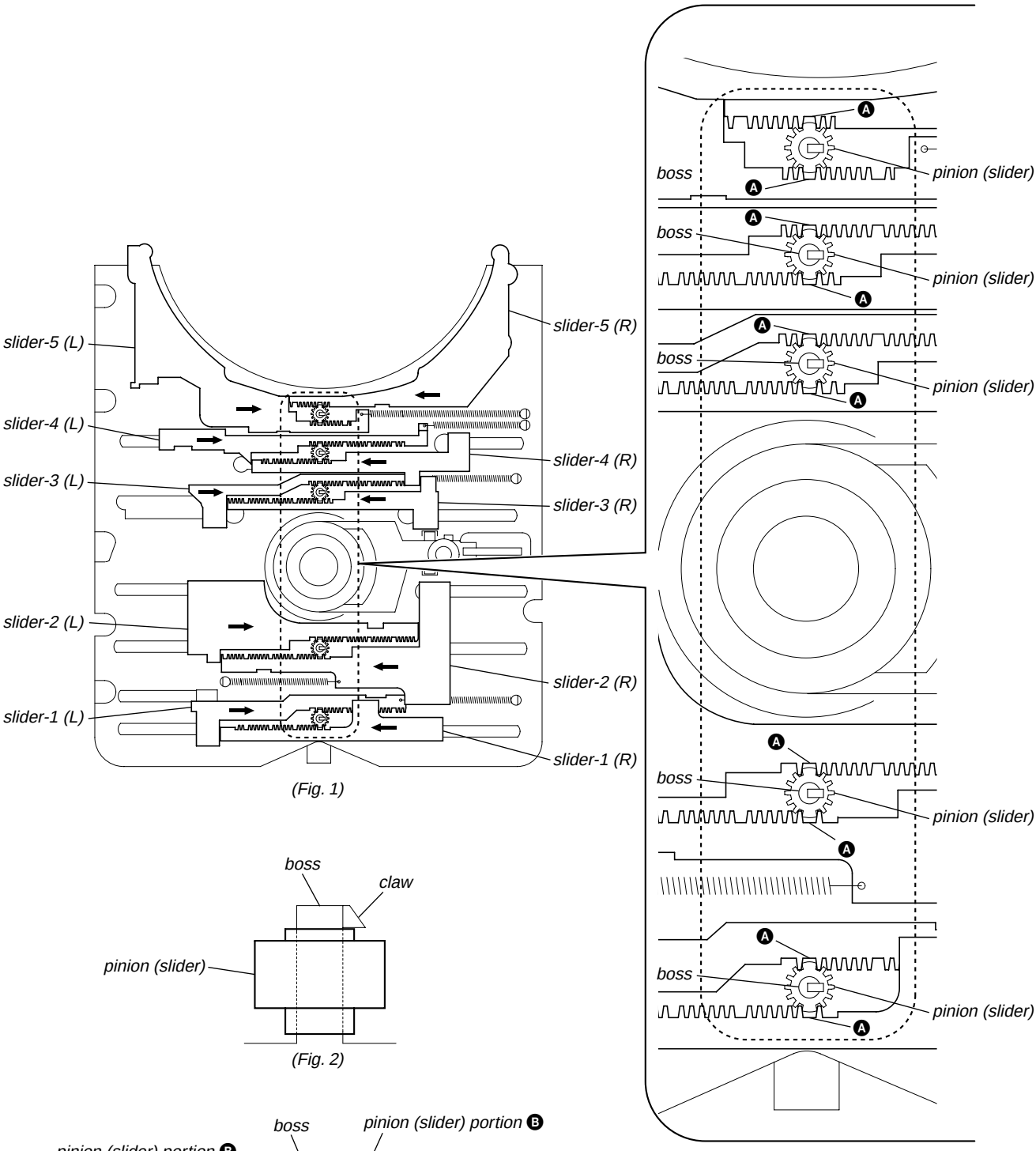

❶ Fit three shafts of the stocker assy in respective slits of the cams (stocker U/D).
Note: For the location of slits of the cams (stocker U/D), see 4-6. HOW TO INSTALL CAM (STOCKER U/D).
cam (stocker U/D)
cam (stocker U/D)
shaft
stocker assy
shaft
cam (stocker U/D)
cam (stocker U/D)
cam (stocker U/D)
shaft
stocker assy
pulley (stocker)
pulley (stocker)
A
❷ Making sure that three shafts of the stocker assy fit in respective slits of the cams (stocker U/D), rotate the pulley (stocker) in the direction of arrow A by hand to store the stocker assy.

## 2-8. PHASE ADJUSTMENT BETWEEN PINIONS (SLIDER) AND SLIDER-1 TO 5 (L/R)

❶ *As shown in the following figure, adjust the portion Ⓐ of each slider to the boss with the slider-1 to 5 (L) and the slider-1 to 5 (R) pushed in the arrow directions respectively (see Fig. 1).*

❷ *Paying attention to the up/down direction of the pinion (slider) (see Fig. 2), install each pinion (slider) so that the portion Ⓑ of each pinion (slider) meshes with the portion Ⓐ of each slider (see Fig. 3).*

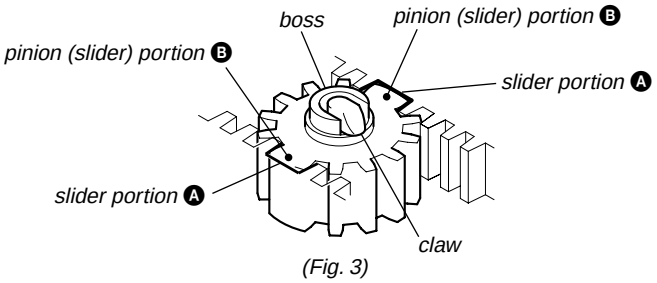
*Note: Push in the pinion (slider) until the claw of the boss comes out above the pinion (slider) to lock.*




*(Fig. 1)*

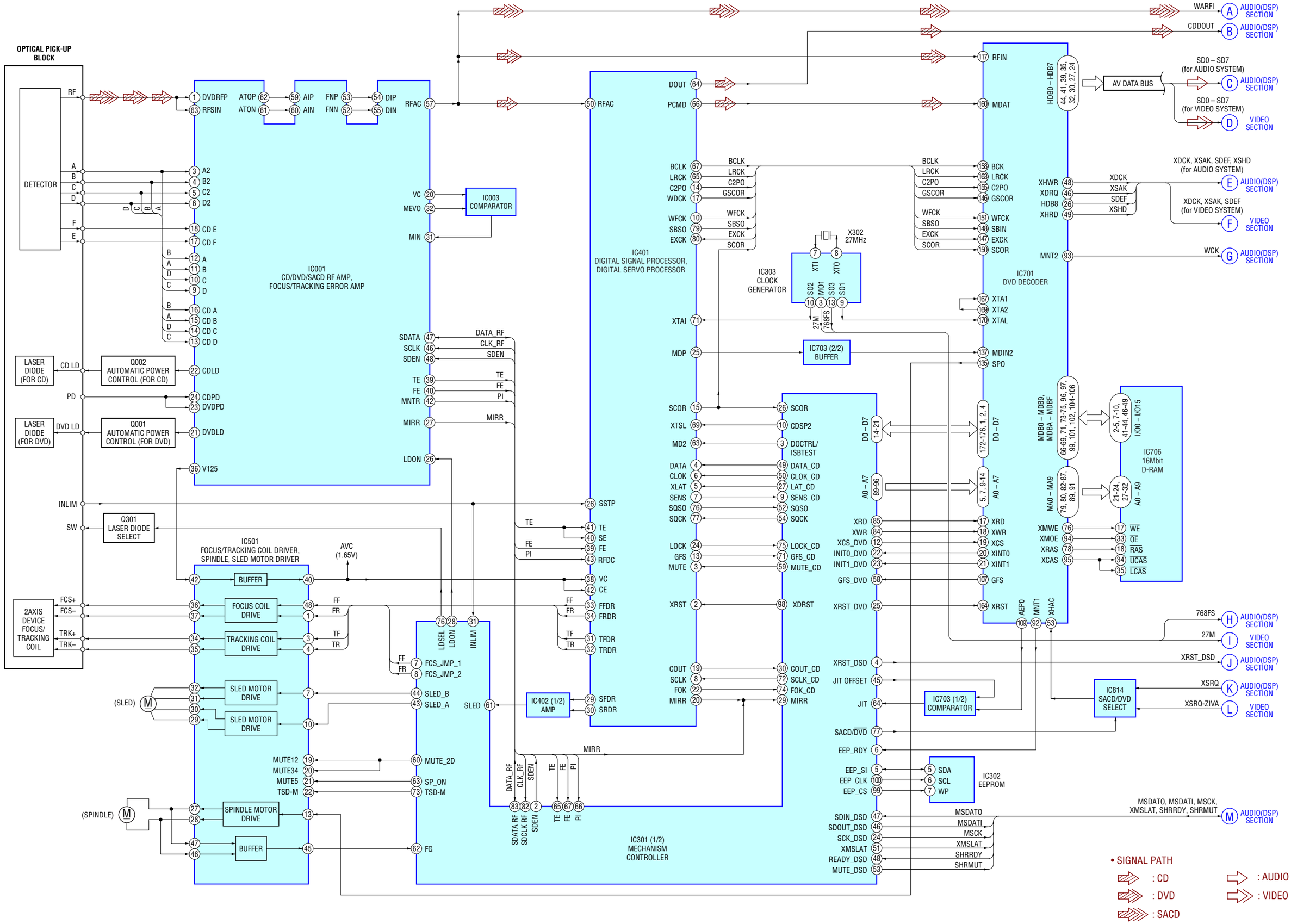



*(Fig. 2)*

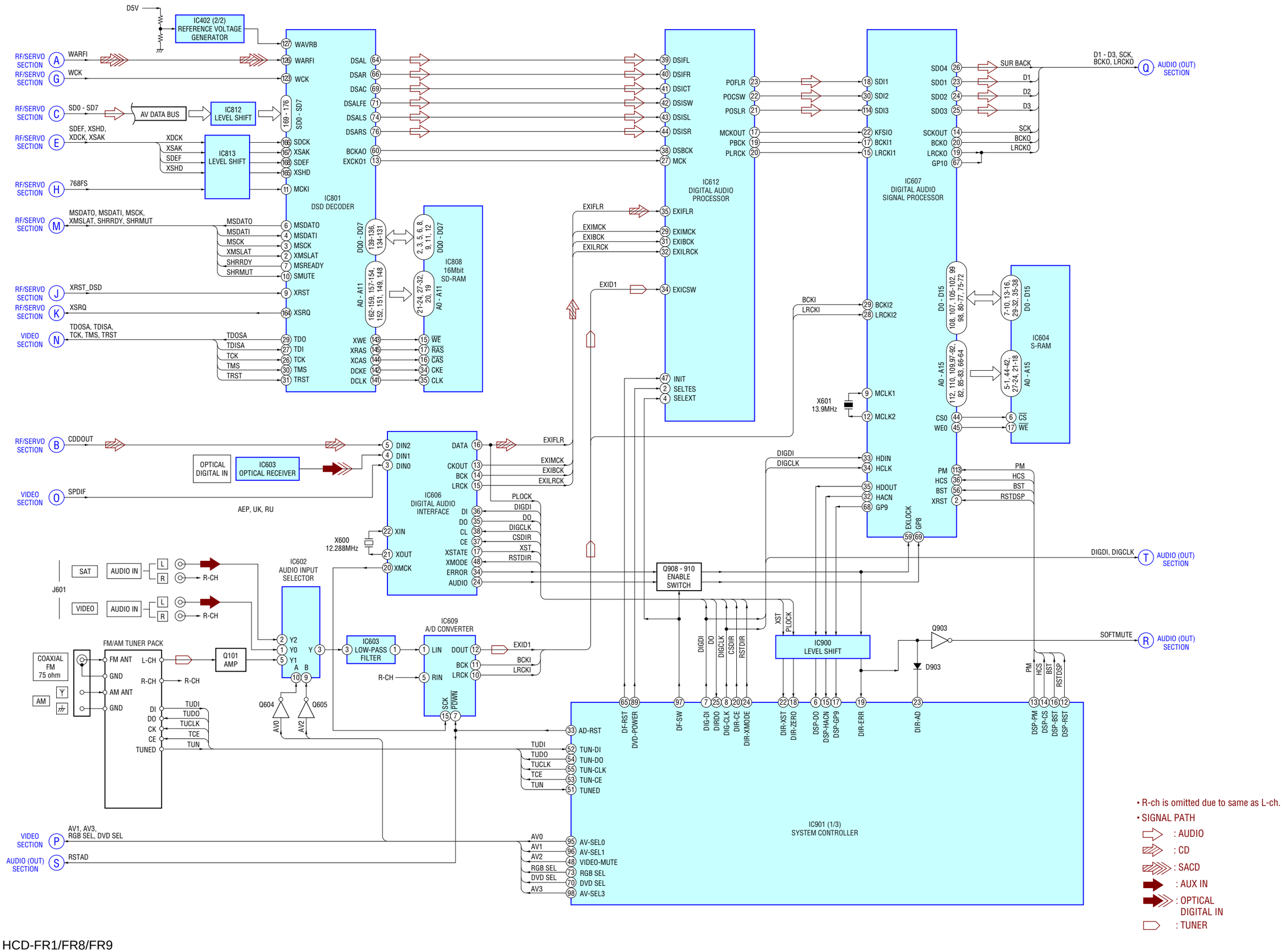



*(Fig. 3)*

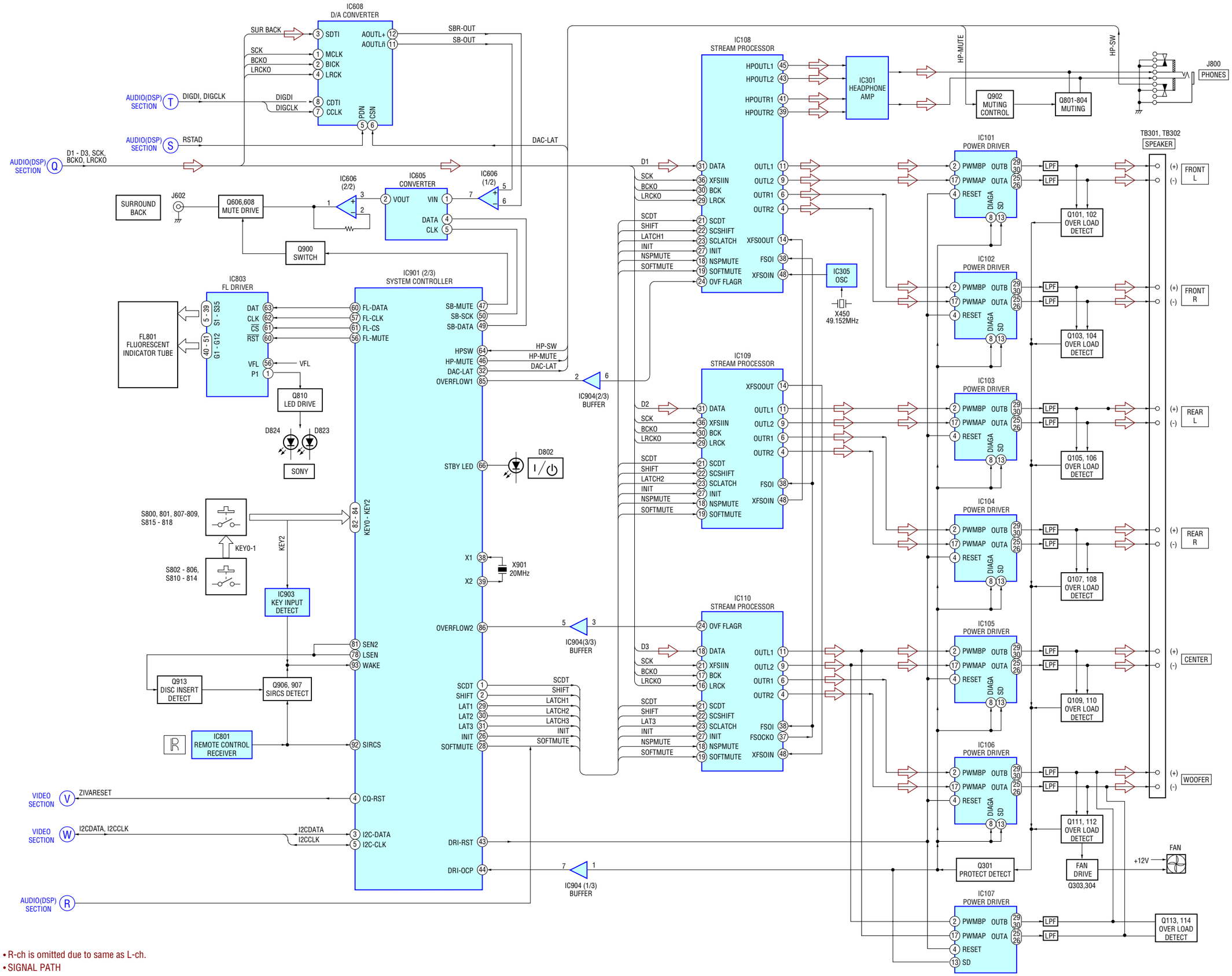
## 3-1. BLOCK DIAGRAM — RF/SERVO SECTION —



## 3-2. BLOCK DIAGRAM — AUDIO (DSP) SECTION —

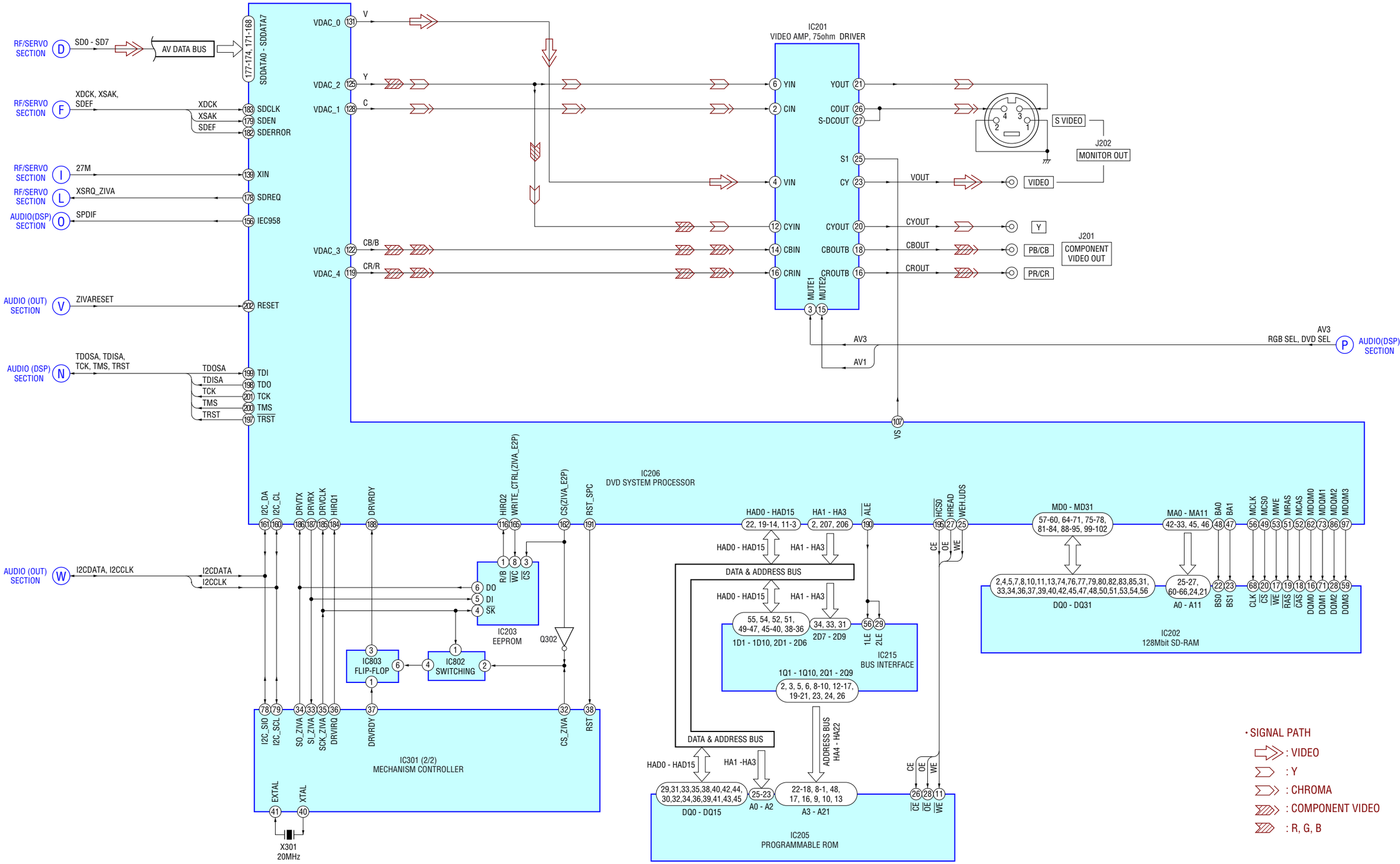


## 3-3. BLOCK DIAGRAM — AUDIO (OUT) SECTION —

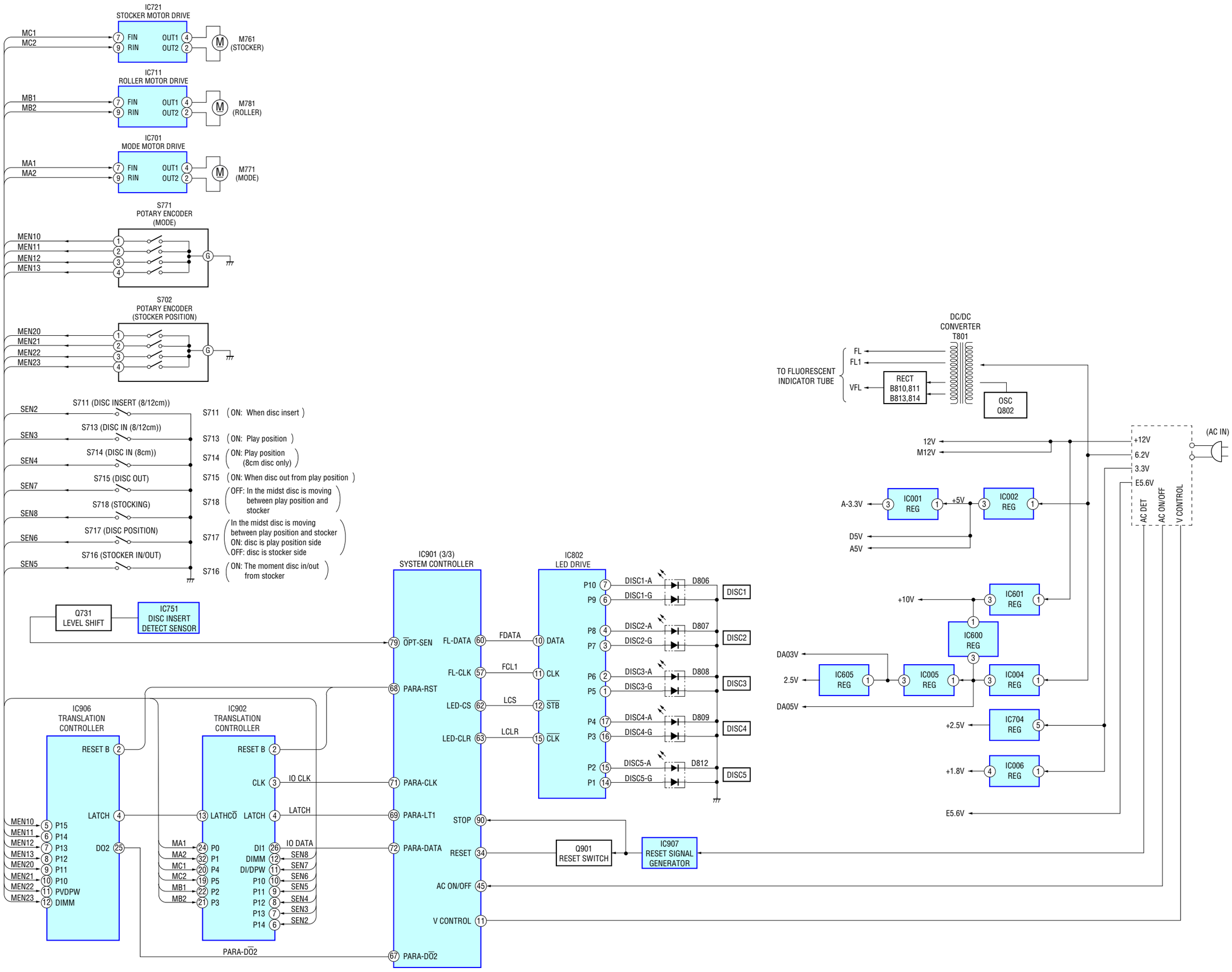



- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  : AUDIO

## 3-4. BLOCK DIAGRAM — VIDEO SECTION —



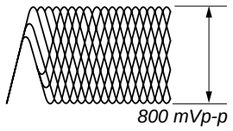
## 3-5. BLOCK DIAGRAM — POWER SECTION —



- **Waveforms**

**– RF Board –**

**1** IC001 ① (DVDRFP)




200 mV/DIV, 100 ns/DIV

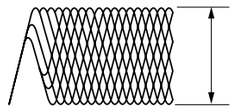
**2** IC001 ㊴ (TE)

500 mV/DIV, 1 ms/DIV

**3** IC001 ㊵ (FE)

100 mV/DIV, 1 ms/DIV

**4** IC001 ㊼ (RFAC)




500 mV/DIV, 100 ns/DIV

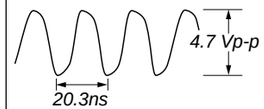
**– DDCOM Board –**

**19** Q802 collector

10 V/DIV, 4 µs/DIV

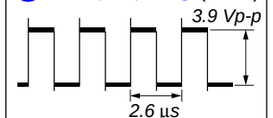
**– AMP Board –**

**20** IC305 ④




1 V/DIV, 10 ns/DIV

**21** IC108,109,110 ⑪ (OUTL1)

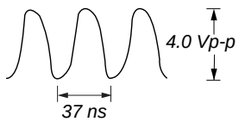



1 V/DIV, 1 µs/DIV

**– DMB08 Board –**

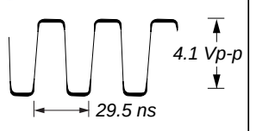
⑪ to ⑮ : color bars video signal

**5** IC303 ⑧ (XTO)



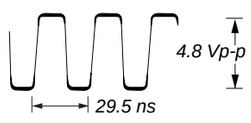

1 V/DIV, 10 ns/DIV

**6** IC303 ⑨ (SO1)



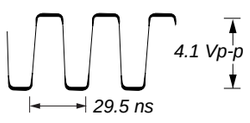

1 V/DIV, 10 ns/DIV

**7** IC303 ⑩ (SO2)



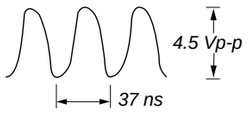

1 V/DIV, 10 ns/DIV

**8** IC303 ⑬ (SO3)



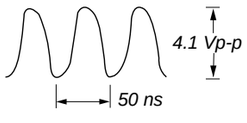

1 V/DIV, 10 ns/DIV

**9** IC303 ③ (MO1)



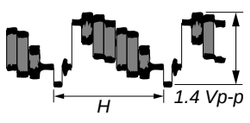

1 V/DIV, 10 ns/DIV

**10** IC301 ㊵ (XTAL)



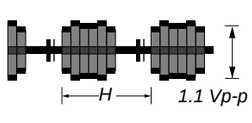

1 V/DIV, 20 ns/DIV

**11** IC206 ⑬① (VDAC_0)



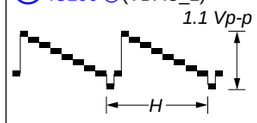

500 mV/DIV, 20 µs/DIV

**12** IC206 ⑱ (VDAC_1)



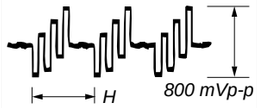

500 mV/DIV, 20 µs/DIV

**13** IC206 ⑮ (VDAC_2)



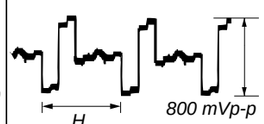

500 mV/DIV, 20 µs/DIV

**14** IC206 ⑫ (VDAC_3)



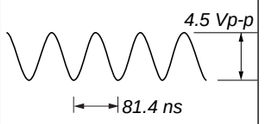

200 mV/DIV, 20 µs/DIV

**15** IC206 ⑲ (VDAC_4)



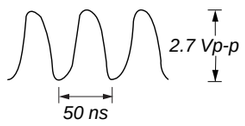

200 mV/DIV, 20 µs/DIV

**16** IC606 ㉑ (XOUT)



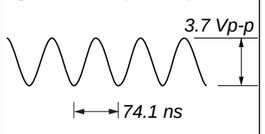

1 V/DIV, 40 ns/DIV

**17** IC901 ㊳ (X2)




1 V/DIV, 20 ns/DIV

**18** IC607 ⑫ (MCLK2)

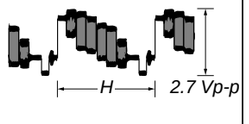



1 V/DIV, 40 ns/DIV

**– IO Board –**

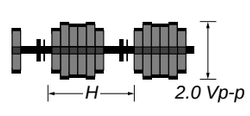
㉒ to ㉖ : color bars video signal

**22** IC201 ㉓ (CVBS OUT)



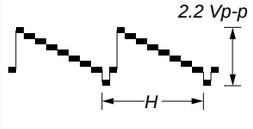

1 V/DIV, 20 µs/DIV

**23** IC201 ㉖ (COUT)



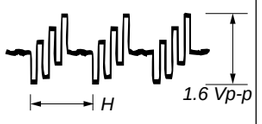

1 V/DIV, 20 µs/DIV

**24** IC201 ⑳ (CYOUT)



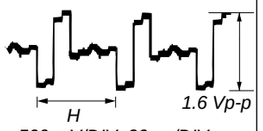

1 V/DIV, 20 µs/DIV

**25** IC201 ⑱ (CbOUT)




500 mV/DIV, 20 µs/DIV

**26** IC201 ⑯ (CrOUT)

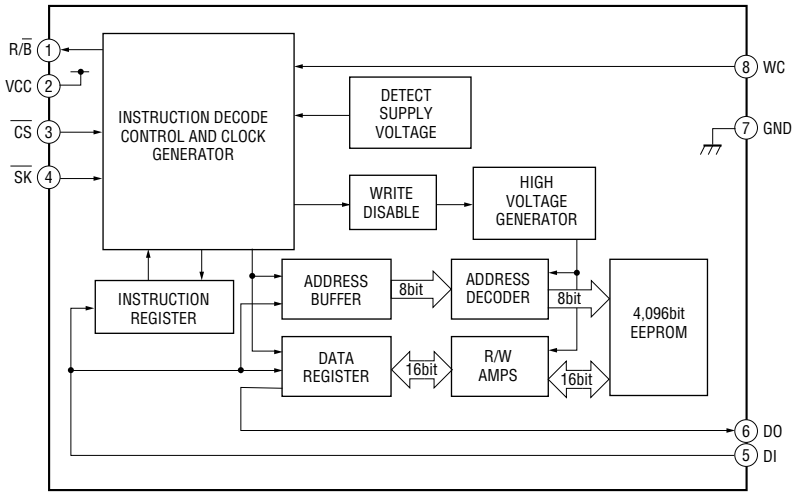



500 mV/DIV, 20 µs/DIV

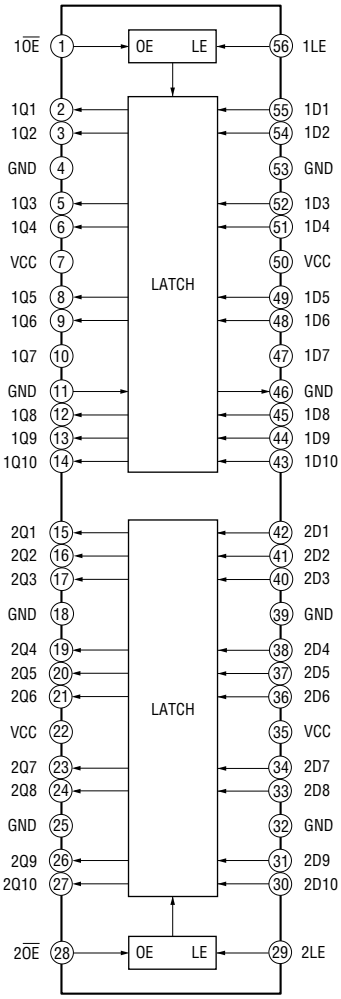
- **IC Block Diagrams**

**– DMB08 Board –**

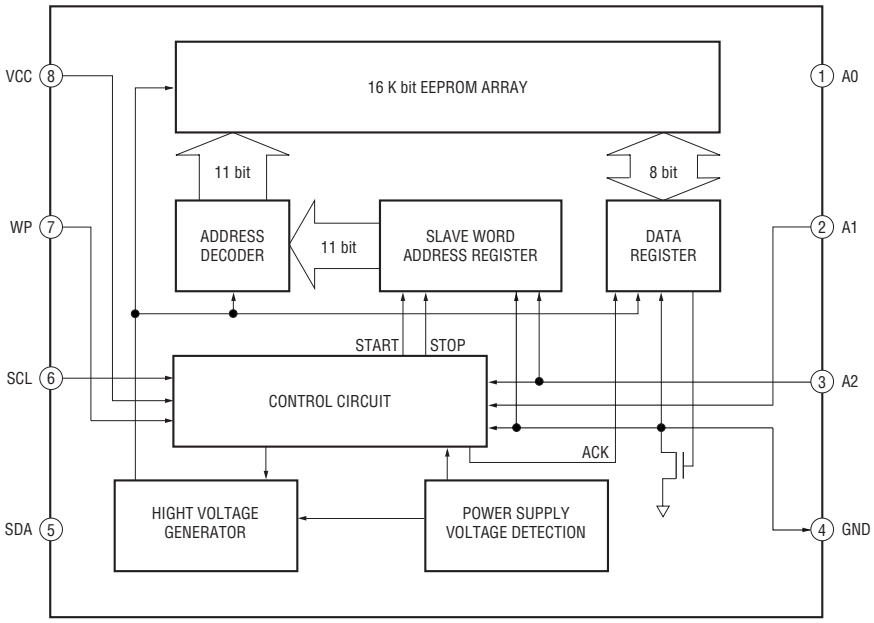
**IC203 BR9040F-WE2**



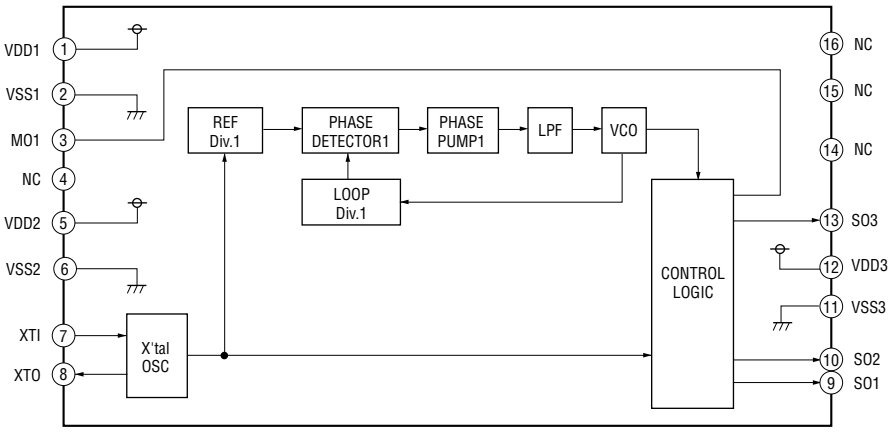

**IC215 SN74ALVCH16841DGGR**



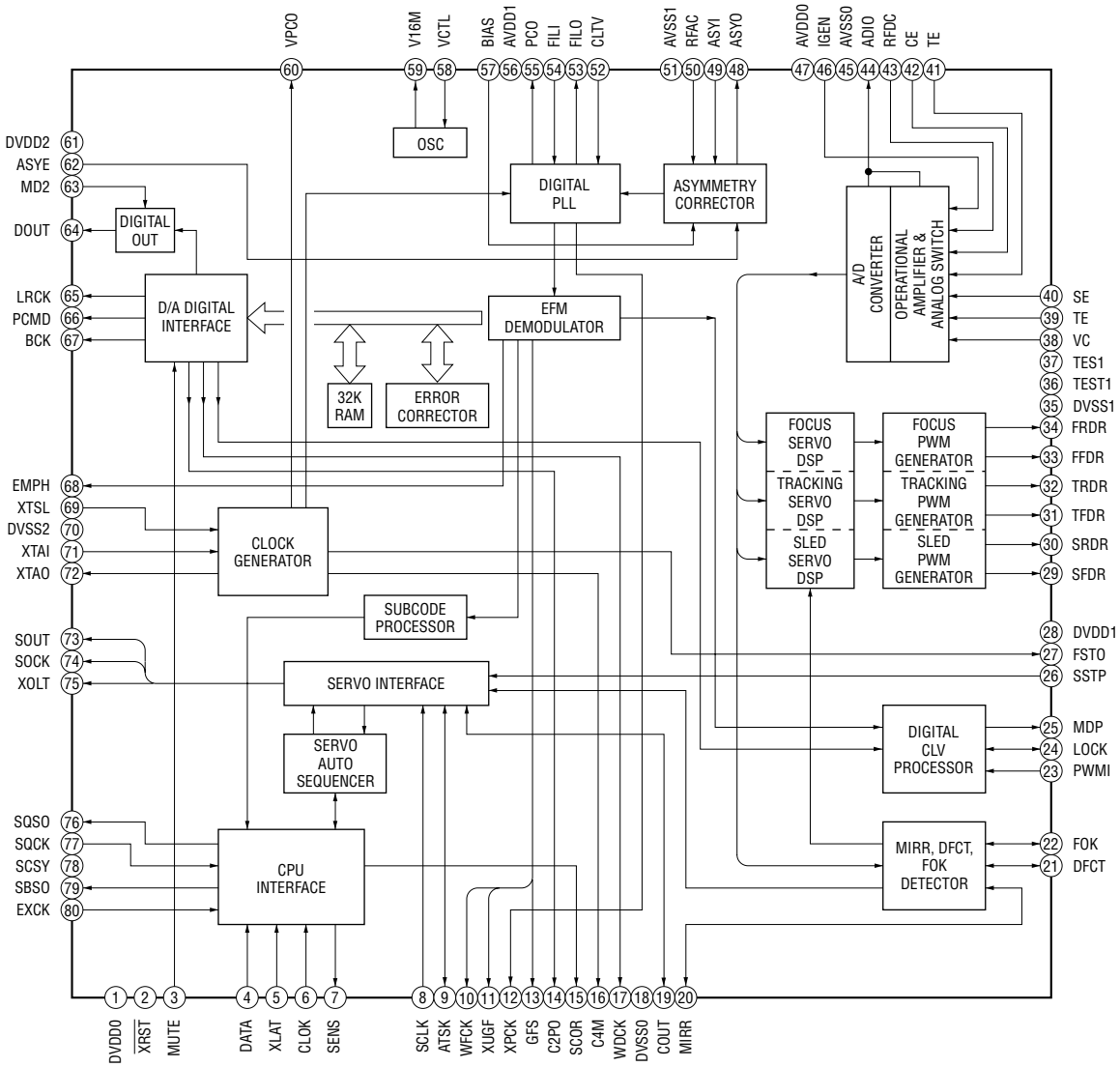

**IC302 BR24L16F-WE2**



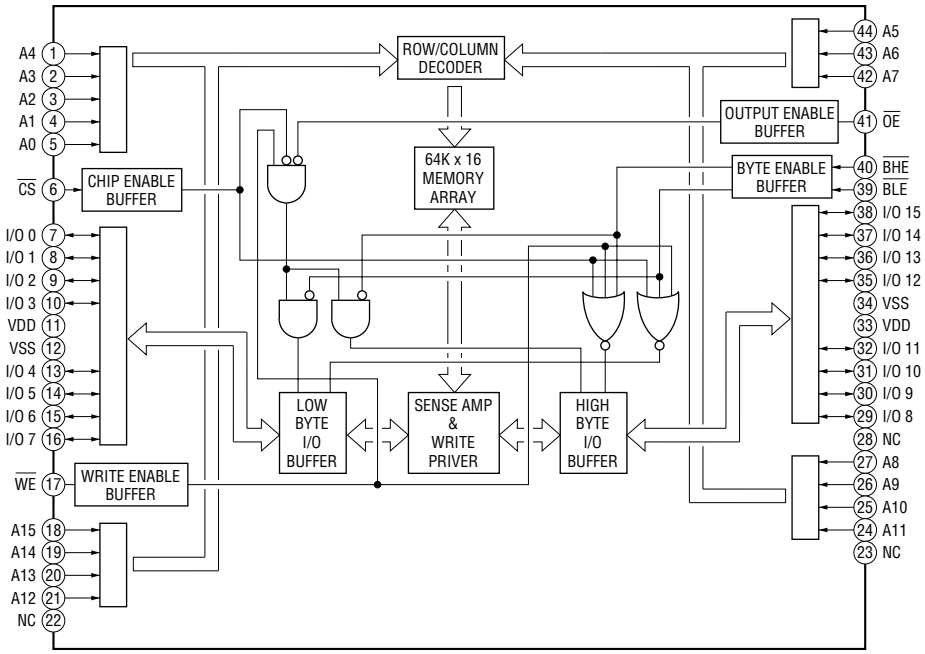
### IC303 SM8707GV-G-E2



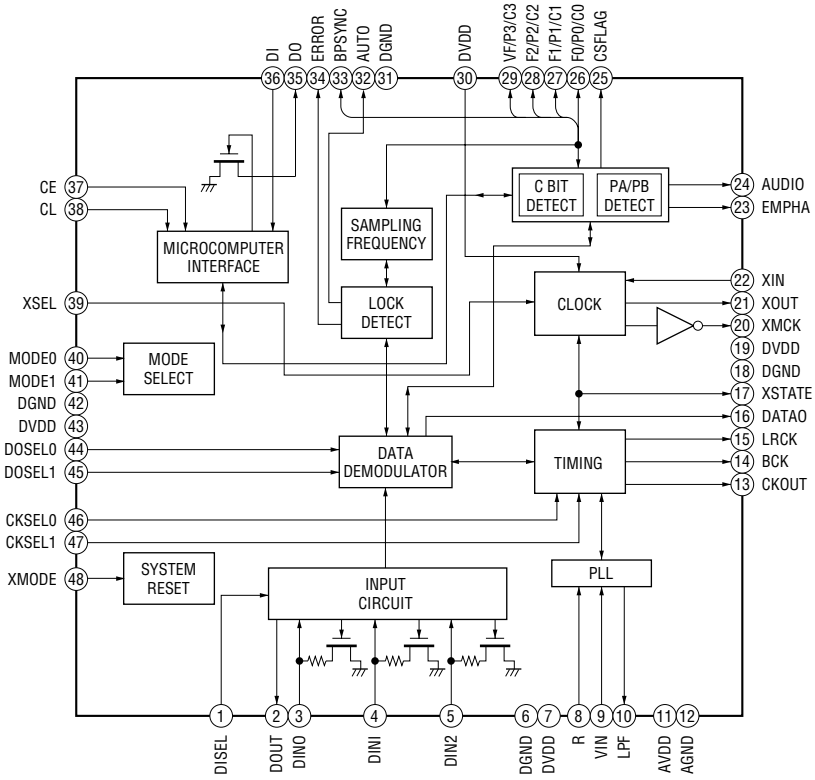

### IC401 CXD3068Q



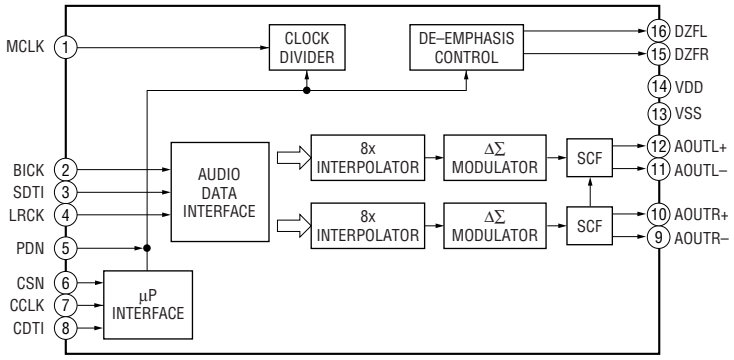
## IC604 IS61LV6416-10TLT



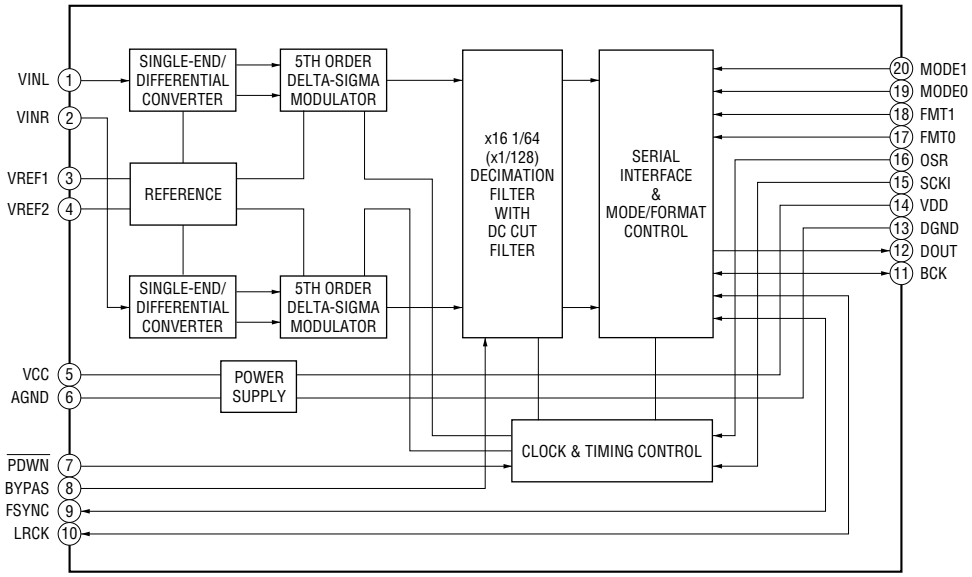

## IC606 LC89056W-E



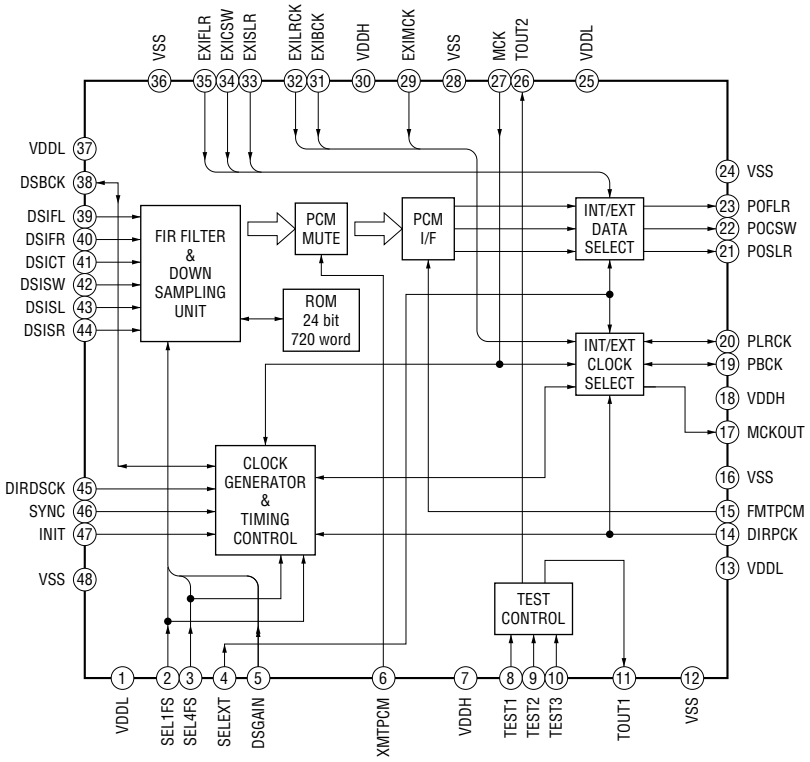
### IC608 AK4381VT-E2



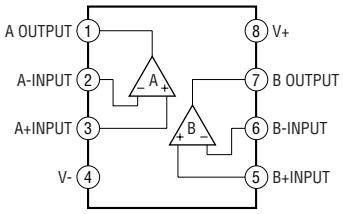

### IC609 PCM1802DBR



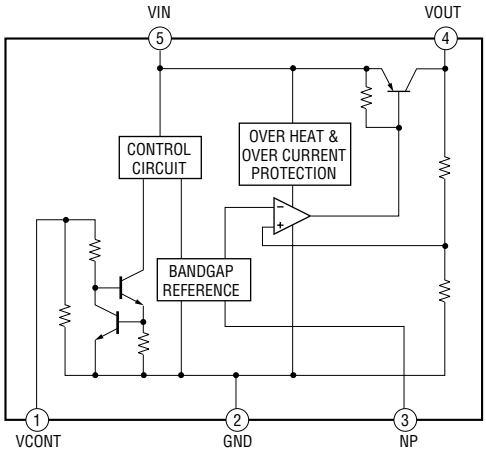
## IC612 CXD9742Q



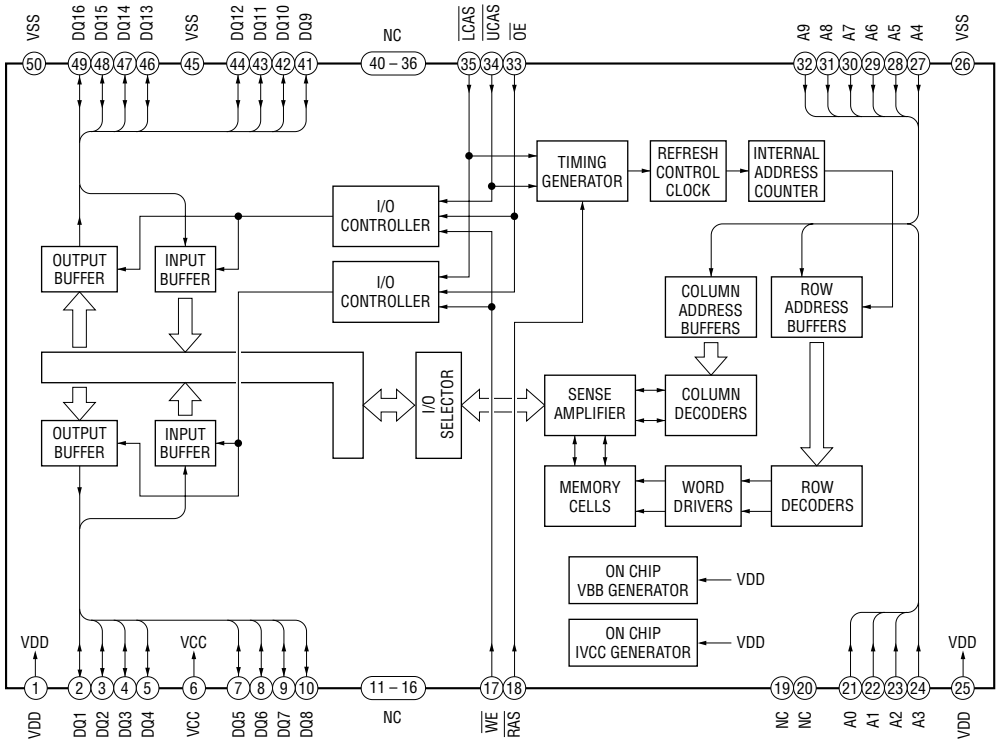

## IC703 NJM3404AV (TE2)



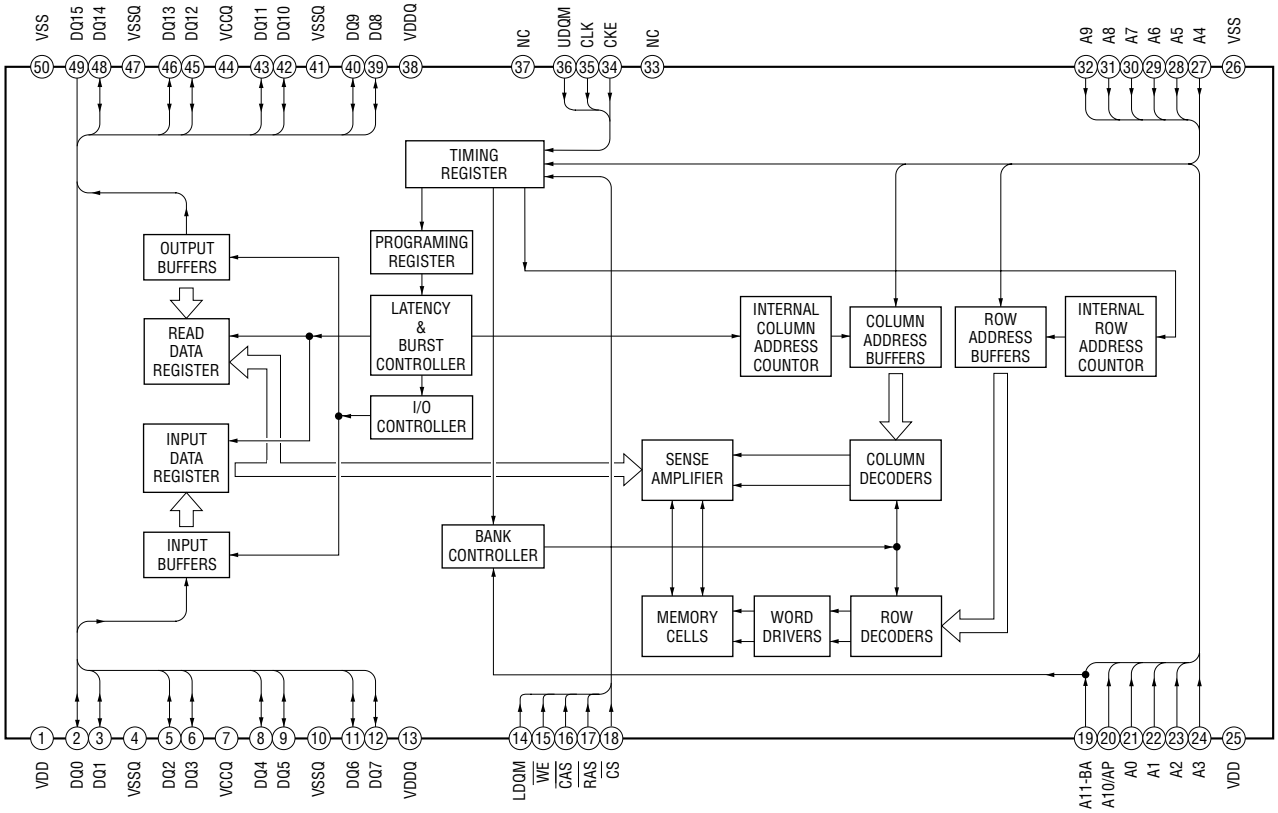

## IC704 TK11125CSCL-G



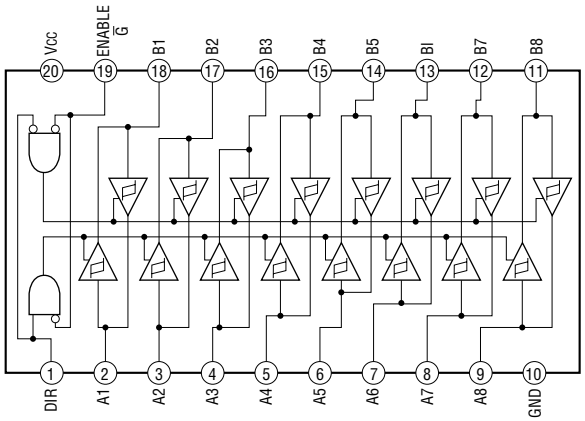
### IC706 M51V18165M-60TS-KR1


VSS DQ16 DQ15 DQ14 DQ13 VSS DQ12 DQ11 DQ10 DQ9 NC LCAS UCAS OE A9 A8 A7 A6 A5 A4 VSS
50 49 48 47 46 45 44 43 42 41 40 – 36 35 34 33 32 31 30 29 28 27 26
TIMING GENERATOR
REFRESH CONTROL CLOCK
INTERNAL ADDRESS COUNTER
I/O CONTROLLER
I/O CONTROLLER
OUTPUT BUFFER
INPUT BUFFER
OUTPUT BUFFER
INPUT BUFFER
I/O SELECTOR
COLUMN ADDRESS BUFFERS
ROW ADDRESS BUFFERS
SENSE AMPLIFIER
COLUMN DECODERS
MEMORY CELLS
WORD DRIVERS
ROW DECODERS
ON CHIP VBB GENERATOR
VDD
ON CHIP IVCC GENERATOR
VDD
VDD VCC VDD
1 2 3 4 5 6 7 8 9 10 11 – 16 17 18 19 20 21 22 23 24 25
VDD DQ1 DQ2 DQ3 DQ4 VCC DQ5 DQ6 DQ7 DQ8 NC WE RAS NC NC A0 A1 A2 A3 VDD

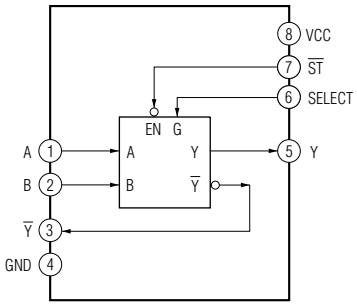
### IC808 MSM56V16160F-8TK7R1


VSS DQ15 DQ14 VSSQ DQ13 DQ12 VCCQ DQ11 DQ10 VSSQ DQ9 DQ8 VDDQ NC UDQM CLK CKE NC A9 A8 A7 A6 A5 A4 VSS
50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26
TIMING REGISTER
OUTPUT BUFFERS
PROGRAMING REGISTER
LATENCY & BURST CONTROLLER
READ DATA REGISTER
I/O CONTROLLER
INPUT DATA REGISTER
INPUT BUFFERS
BANK CONTROLLER
INTERNAL COLUMN ADDRESS COUNTOR
COLUMN ADDRESS BUFFERS
ROW ADDRESS BUFFERS
INTERNAL ROW ADDRESS COUNTOR
SENSE AMPLIFIER
COLUMN DECODERS
MEMORY CELLS
WORD DRIVERS
ROW DECODERS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
VDD DQ0 DQ1 VSSQ DQ2 DQ3 VCCQ DQ4 DQ5 VSSQ DQ6 DQ7 VDDQ LDQM WE CAS RAS CS A11-BA A10/AP A0 A1 A2 A3 VDD

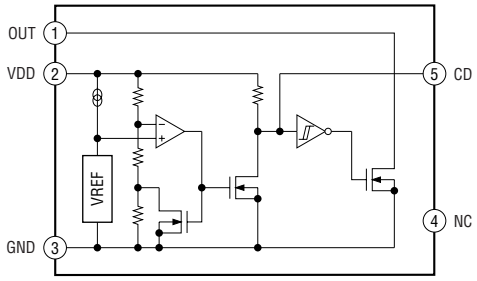
### IC812, 813 SN74LV245APWR




### IC814 TC7WH157FK (TE85R)

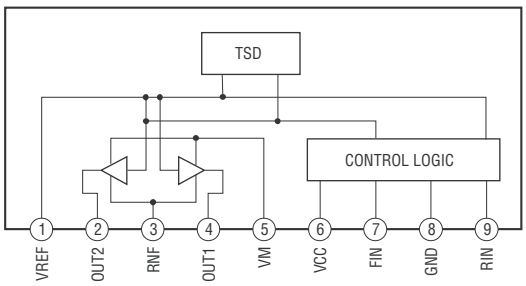



### IC907 PST3645NR



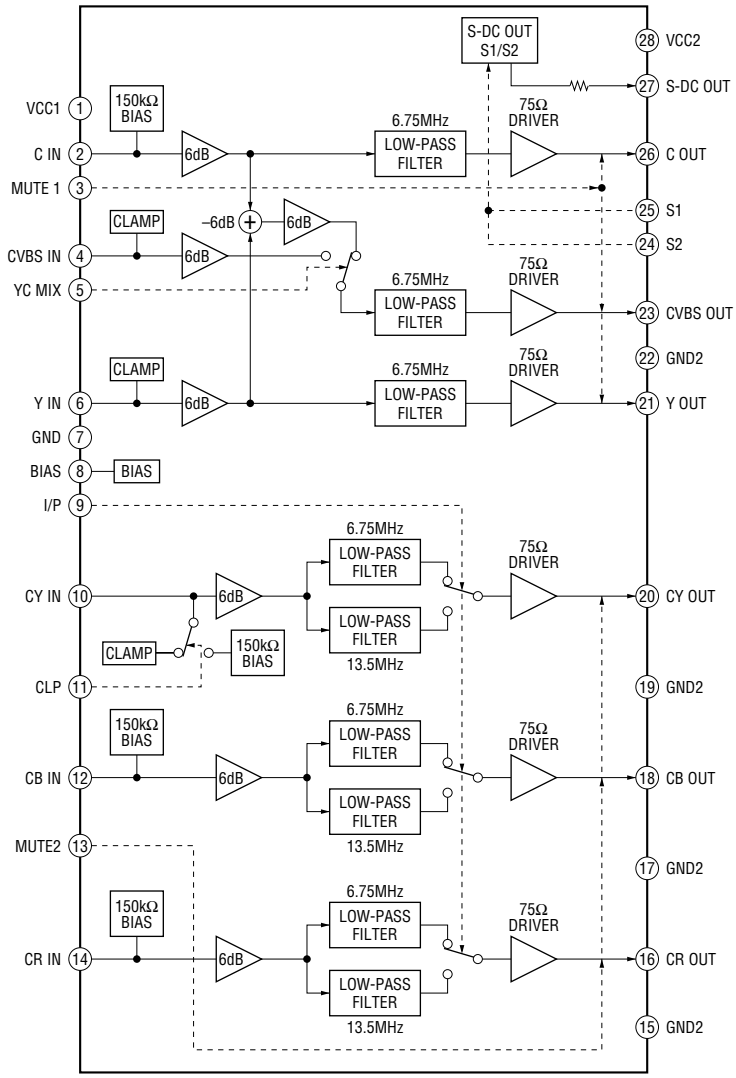

**– RELAY Board –**

### IC701, 711, 721 BA6956AN

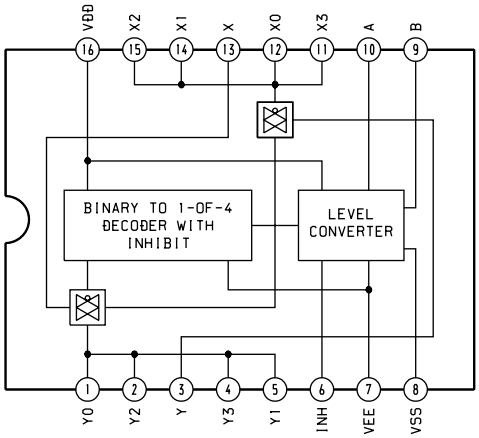


**– IO Board –**

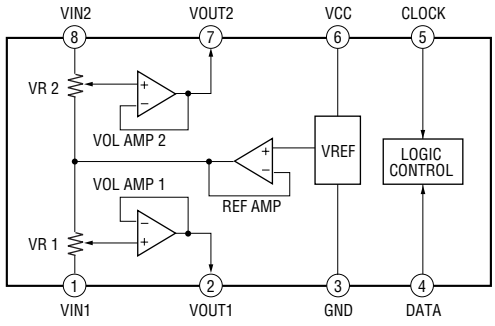
## IC201 MM1623BFBE




## IC602 MC14052 BDR2

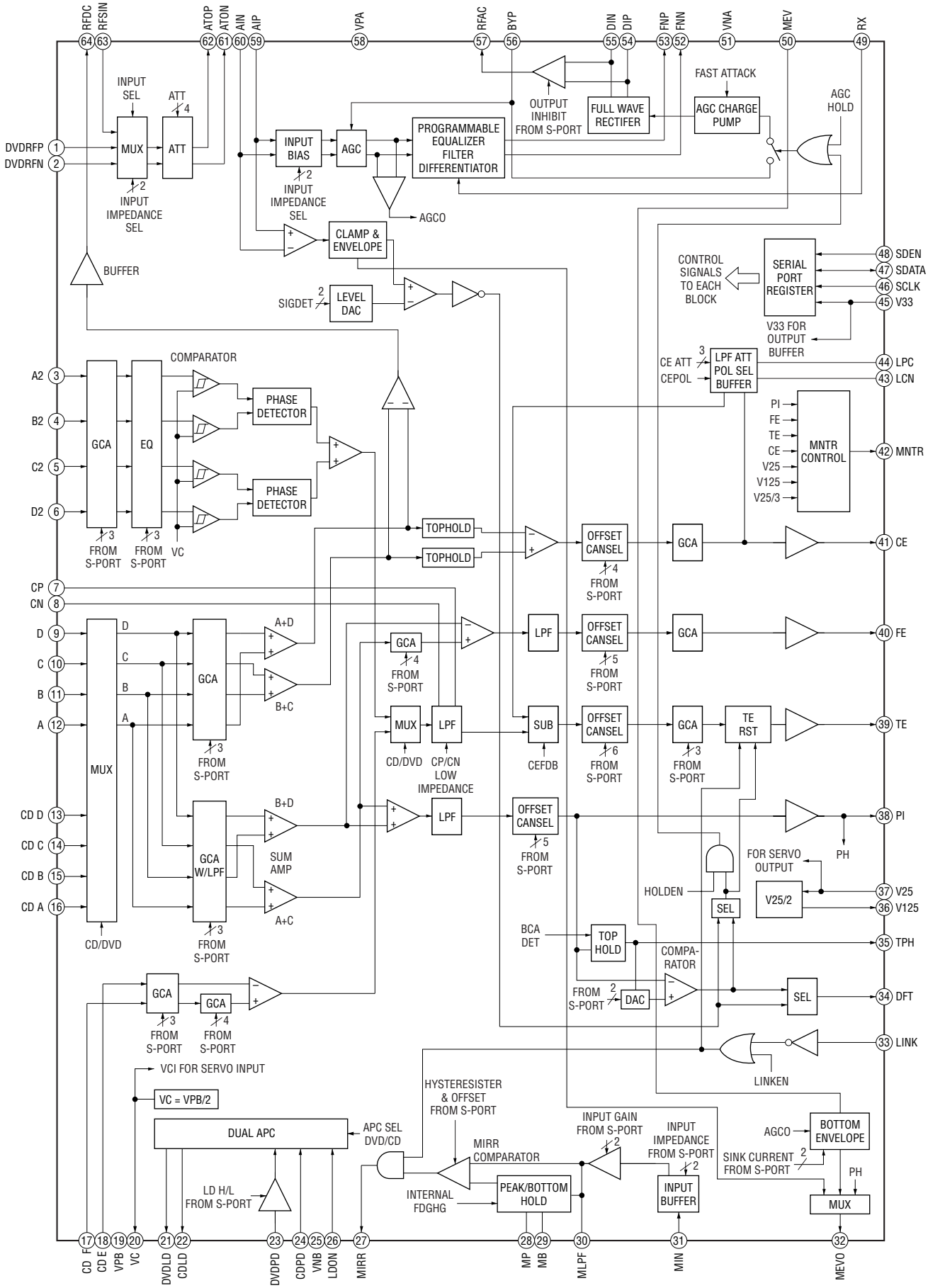



## IC605 M62429FP-TP



**– RF Board –**

**IC001 SP3723CAF0PM**



• **IC Pin Function Description**

**DMB08 BOARD IC206 ZIVA5X-C2F (DVD SYSTEM PROCESSOR)**

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | VDDP | — | Power supply terminal (+3.3V) (I/O signal) |
| 2 | HA1 | I/O | Address bus |
| 3 | HD15 | I/O | Data bus (address signal multiplexed) |
| 4 | HD14 | I/O | Data bus (address signal multiplexed) |
| 5 | HD13 | I/O | Data bus (address signal multiplexed) |
| 6 | HD12 | I/O | Data bus (address signal multiplexed) |
| 7 | HD11 | I/O | Data bus (address signal multiplexed) |
| 8 | HD10 | I/O | Data bus (address signal multiplexed) |
| 9 | HD9 | I/O | Data bus (address signal multiplexed) |
| 10 | HD8 | I/O | Data bus (address signal multiplexed) |
| 11 | HD7 | I/O | Data bus (address signal multiplexed) |
| 12 | VDDP | — | Power supply terminal (+3.3V) (I/O signal) |
| 13 | GNDP | — | Ground terminal (I/O signal) |
| 14 | HD6 | I/O | Data bus (address signal multiplexed) |
| 15 | HD5 | I/O | Data bus (address signal multiplexed) |
| 16 | HD4 | I/O | Data bus (address signal multiplexed) |
| 17 | HD3 | I/O | Data bus (address signal multiplexed) |
| 18 | HD2 | I/O | Data bus (address signal multiplexed) |
| 19 | HD1 | I/O | Data bus (address signal multiplexed) |
| 20 | VDDP | — | Power supply terminal (+3.3V) (I/O signal) |
| 21 | GNDP | — | Ground terminal (I/O signal) |
| 22 | HD0 | I/O | Data bus (address signal multiplexed) |
| 23 | HDTACK | I/O | Acknowledge signal input/output for host data transfer (not used) |
| 24 | HIRQ0 | I | Interrupt signal input for Medusa (not used) |
| 25 | WEH.UDS | I/O | Host upper data strobe signal output |
| 26 | WEL.LDS | I/O | Host lower data strobe signal output (not used) |
| 27 | HREAD | I/O | Read/write strobe signal output |
| 28 | GPIO0 | I/O | Jig detection port (pull-up) |
| 29 | GND | — | Ground terminal (inside core) |
| 30 | VDD | — | Power supply terminal (+1.8V) (inside core) |
| 31 | GND25 | — | Ground terminal (SDRAM I/O signal) |
| 32 | VDD25 | — | Power supply terminal (+3.3V) (SDRAM I/O signal) |
| 33 | MA9 | O | SDRAM address bus |
| 34 | MA8 | O | SDRAM address bus |
| 35 | MA7 | O | SDRAM address bus |
| 36 | MA6 | O | SDRAM address bus |
| 37 | MA5 | O | SDRAM address bus |
| 38 | MA4 | O | SDRAM address bus |
| 39 | MA3 | O | SDRAM address bus |
| 40 | MA2 | O | SDRAM address bus |
| 41 | MA1 | O | SDRAM address bus |
| 42 | MA0 | O | SDRAM address bus |
| 43 | GND25 | — | Ground terminal (SDRAM I/O signal) |
| 44 | VDD25 | — | Power supply terminal (+3.3V) (SDRAM I/O signal) |
| 45 | MA10 | O | SDRAM address bus |
| 46 | MA11 | O | SDRAM address bus |
| 47 | BA1 | O | SDRAM bank select 1 signal output |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 48 | BA0 | O | SDRAM bank select 0 signal output |
| 49 | MCS0 | O | SDRAM chip select 0 signal output |
| 50 | MCS1 | O | Not used |
| 51 | MRAS | O | SDRAM row address strobe signal output |
| 52 | MCAS | O | SDRAM column address strobe signal output |
| 53 | MWE | O | SDRAM write enable signal output (“H” : read, “L” : write) |
| 54 | GND25 | — | Ground terminal (SDRAM I/O signal) |
| 55 | VDD25 | — | Power supply terminal (+3.3V) (SDRAM I/O signal) |
| 56 | MCLK | O | SDRAM Clock output |
| 57 | MD0 | I/O | SDRAM data |
| 58 | MD1 | I/O | SDRAM data |
| 59 | MD2 | I/O | SDRAM data |
| 60 | MD3 | I/O | SDRAM data |
| 61 | GND25 | — | Ground terminal (SDRAM I/O signal) |
| 62 | MDQM0 | O | Byte read /write mask signal 0 output |
| 63 | VDD25 | — | Power supply terminal (+3.3V) (SDRAM I/O signal) |
| 64 | MD4 | I/O | SDRAM data |
| 65 | MD5 | I/O | SDRAM data |
| 66 | MD6 | I/O | SDRAM data |
| 67 | MD7 | I/O | SDRAM data |
| 68 | MD8 | I/O | SDRAM data |
| 69 | MD9 | I/O | SDRAM data |
| 70 | MD10 | I/O | SDRAM data |
| 71 | MD11 | I/O | SDRAM data |
| 72 | GND25 | — | Ground terminal (SDRAM I/O signal) |
| 73 | MDQM1 | O | Byte read /write mask signal 1 output |
| 74 | VDD25 | — | Power supply terminal (+3.3V) (SDRAM I/O signal) |
| 75 | MD12 | I/O | SDRAM data |
| 76 | MD13 | I/O | SDRAM data |
| 77 | MD14 | I/O | SDRAM data |
| 78 | MD15 | I/O | SDRAM data |
| 79 | GND | — | Ground terminal (inside core) |
| 80 | VDD | — | Power supply terminal (+1.8V) (inside core) |
| 81 | MD16 | I/O | SDRAM data |
| 82 | MD17 | I/O | SDRAM data |
| 83 | MD18 | I/O | SDRAM data |
| 84 | MD19 | I/O | SDRAM data |
| 85 | GND25 | — | Ground terminal (SDRAM I/O signal) |
| 86 | MDQM2 | O | Byte read /write mask signal 2 output |
| 87 | VDD25 | — | Power supply terminal (+3.3V) (SDRAM I/O signal) |
| 88 | MD20 | I/O | SDRAM data |
| 89 | MD21 | I/O | SDRAM data |
| 90 | MD22 | I/O | SDRAM data |
| 91 | MD23 | I/O | SDRAM data |
| 92 | MD24 | I/O | SDRAM data |
| 93 | MD25 | I/O | SDRAM data |
| 94 | MD26 | I/O | SDRAM data |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 95 | MD27 | I/O | SDRAM data |
| 96 | GND25 | — | Ground terminal (SDRAM I/O signal) |
| 97 | MDQM3 | O | Byte read /write mask signal 3 output |
| 98 | VDD25 | — | Power supply terminal (+3.3V) (SDRAM I/O signal) |
| 99 | MD28 | I/O | SDRAM data |
| 100 | MD29 | I/O | SDRAM data |
| 101 | MD30 | I/O | SDRAM data |
| 102 | MD31 | I/O | SDRAM data |
| 103 | GND25 | — | Ground terminal (SDRAM I/O signal) |
| 104 | VDD25 | — | Power supply terminal (+3.3V) (SDRAM I/O signal) |
| 105 | VCLK | I/O | System clock (not used) |
| 106 | I2C_CTRL | — | Not used |
| 107 | VS | O | S1 signal output |
| 108 | I/P SW | O | Progressive/interlace switch signal output (not used) |
| 109 | GPIO1 (5) | — | Not used |
| 110 | GPIO1 (4) | — | Not used |
| 111 | VDDP | — | Power supply terminal (+3.3V) (I/O signal) |
| 112 | GNDP | — | Ground terminal (I/O signal) |
| 113 | GPIO1 (3) | — | Not used |
| 114 | GPIO1 (2) | — | Not used |
| 115 | GPIO1 (1) | — | Not used |
| 116 | HIRQ2_ | I | Busy signal input from the EEPROM (IC203) |
| 117 | VDAC_4B | — | Video DAC bias bit 4 (connected to the ground) |
| 118 | VDAC_VDD4 | — | Power supply terminal (+3.3V) (Video DAC 4) |
| 119 | VDAC_4 | O | VDAC output 4 |
| 120 | VDAC_3B | — | Video DAC bias bit 3 (connected to the ground) |
| 121 | VDAC_VDD3 | — | Power supply terminal (+3.3V) (Video DAC 3) |
| 122 | VDAC_3 | O | VDAC output 3 |
| 123 | VDAC_2B | — | Video DAC bias bit 2 (connected to the ground) |
| 124 | VDAC_VDD2 | — | Power supply terminal (+3.3V) (Video DAC 2) |
| 125 | VDAC_2 | O | VDAC output 2 |
| 126 | VDAC_1B | — | Video DAC bias bit 1 (connected to the ground) |
| 127 | VDAC_VDD1 | — | Power supply terminal (+3.3V) (Video DAC 1) |
| 128 | VDAC_1 | O | VDAC output 1 |
| 129 | VDAC_0B | — | Video DAC bias bit 0 (connected to the ground) |
| 130 | VDAC_VDD0 | — | Power supply terminal (+3.3V) (Video DAC 0) |
| 131 | VDAC_0 | O | VDAC output 0 |
| 132 | VDAC_DVSS | — | Ground terminal (Video DAC digital system) |
| 133 | VDAC_DVDD | — | Power supply terminal (+3.3V) (Video DAC digital system) |
| 134 | VDAC_REFVDD | — | Power supply terminal (Video DAC reference) |
| 135 | VDAC_REF | I | Reference voltage input terminal(for Video DAC) |
| 136 | VDAC_REFVSS | — | Ground terminal (Video DAC reference) |
| 137 | XVSS | — | Ground terminal (crystal oscillator) |
| 138 | XOUT | O | Crystal oscillation signal output |
| 139 | XIN | I | Crystal oscillation signal input |
| 140 | XVDD | — | Power supply terminal (crystal oscillator) |
| 141 | AVSS2 | — | Ground terminal (analog PLL) |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 142 | AVDD2 | — | Power supply terminal (+3.3V) (analog PLL) |
| 143 | AVDD1 | — | Power supply terminal (+3.3V) (analog PLL) |
| 144 | AVSS1 | — | Ground terminal (analog PLL) |
| 145 | VDD | — | Power supply terminal (+1.8V) (inside core) |
| 146 | GND | — | Ground terminal (inside core) |
| 147 | XCK | O | Audio system clock output (not used) |
| 148 | LRCK | O | LRCK signal output for audio (not used) |
| 149 | BCK | O | BCK signal output for audio (not used) |
| 150 | GPIO4 (1) | — | Not used (pull-up) |
| 151 | GPIO4 (2) | — | Not used (pull-up) |
| 152 | VDDP | — | Power supply terminal (+3.3V) (I/O signal) |
| 153 | GNDP | — | Ground terminal (I/O signal) |
| 154 | GPIO4 (3) | — | Not used (pull-down) |
| 155 | GPIO4 (4) | — | Not used (pull-down) |
| 156 | IEC958 | O | S/PDIF signal |
| 157 | DAI_DATA | I | Data input from ADC (not used) |
| 158 | DAI_BCK | I | BCK signal input from ADC (not used) |
| 159 | DAI_LRCK | I | LRCK signal input from ADC (not used) |
| 160 | I2C_CL | I/O | I2C clock bus |
| 161 | I2C_DA | I/O | I2C data bus |
| 162 | CS(ZIVA_E2P) | O | Chip select signal output to the EEPROM (IC203) |
| 163 | RXD1 | I | Serial data input for check jig |
| 164 | TXD1 | O | Serial data output for check jig |
| 165 | WRITE_CTRL(ZIVA_E2P) | O | Write control signal output to the EEPROM (IC203) |
| 166 | GNDP | — | Ground terminal (I/O signal) |
| 167 | VDDP | — | Power supply terminal (+3.3V) (I/O signal) |
| 168 | SDDATA7 | I | SDBus data7 input |
| 169 | SDDATA6 | I | SDBus data6 input |
| 170 | SDDATA5 | I | SDBus data5 input |
| 171 | SDDATA4 | I | SDBus data4 input |
| 172 | GND | — | Ground terminal (inside core) |
| 173 | VDD | — | Power supply terminal (+1.8V) (inside core) |
| 174 | SDDATA3 | I | SDBus data3 input |
| 175 | SDDATA2 | I | SDBus data2 input |
| 176 | SDDATA1 | I | SDBus data1 input |
| 177 | SDDATA0 | I | SDBus data0 input |
| 178 | SDREQ | O | SDBus data request signal output |
| 179 | SDEN | I | SDBus data enable signal input |
| 180 | GNDP | — | Ground terminal (I/O signal) |
| 181 | VDDP | — | Power supply terminal (+3.3V) (I/O signal) |
| 182 | SDERROR | I | SDBus data error signal input |
| 183 | SDCLK | I | SDBus data clock input |
| 184 | HIRQ1 | I | Interrupt signal input from the mechanism controller (IC301) |
| 185 | DRVCLK | I | Serial data clock input from the mechanism controller (IC301) |
| 186 | DRVTX | I | Serial data input from the mechanism controller (IC301) and the EEPROM (IC203) |
| 187 | DRVRX | O | Serial data output to the mechanism controller (IC301) and the EEPROM (IC203) |
| 188 | DRVRDY | I | Ready signal input from the mechanism controller (IC301) |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 189 | VNW | — | Power supply for 5V tolerance voltage input |
| 190 | $\overline{\text{ALE}}$ | O | Latch enable signal output for address data demux |
| 191 | RST_SPC | O | Reset signal output to the mechanism controller (IC301) |
| 192 | $\overline{\text{HCS3}}$ | O | Not used |
| 193 | $\overline{\text{HCS2}}$ | O | Chip select signal output for Medusa (not used) |
| 194 | $\overline{\text{HCS1}}$ | I/O | Not used |
| 195 | $\overline{\text{HCS0}}$ | O | Chip select signal output to the external ROM (IC205) |
| 196 | VDDP | — | Power supply terminal (+3.3V) (I/O signal) |
| 197 | $\overline{\text{TRST}}$ | I | Reset signal input |
| 198 | TDO | O | Data output |
| 199 | TDI | I | Data input |
| 200 | TMS | I | TMS signal input |
| 201 | TCK | I | TCK signal input |
| 202 | RESET | I | ZIVA reset input |
| 203 | BUS CLK | I/O | Not used |
| 204 | GND | — | Ground terminal (inside core) |
| 205 | VDD | — | Power supply terminal (+1.8V) (inside core) |
| 206 | HA3 | I/O | Address bus 3 |
| 207 | HA2 | I/O | Address bus 2 |
| 208 | GNDP | — | Ground terminal (I/O signal) |

**DMB08 BOARD IC301 CXP973064-245R (MECHANISH CONTROLLER)**

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | EEP SO | O | Not used |
| 2 | SDEN | O | Serial data enable signal output to DVD/CD RF amplifier |
| 3 | DOCTRL/ISBTEST | O | Digital out on/off control signal output to the digital signal processor<br>"L": digital out off, "H": digital out on |
| 4 | XRST DSD | O | Reset signal output to the DSD decoder "L": reset |
| 5 | EEP SI | I/O | Two-way data bus with the EEPROM |
| 6 | EEP RDY | I | EEPROM ready signal input from the DVD decoder |
| 7 | FCS JMP 1 | O | Focus jump 1 signal output to the motor/coil driver |
| 8 | FCS JMP 2 | O | Focus jump 2 signal output to the motor/coil driver |
| 9 | SENS CD | I | Internal status (SENSE) signal input from the digital signal processor |
| 10 | CDSP2 | O | Clock selection signal output to the digital signal processor |
| 11 | CDSP4 | — | Not used |
| 12 | XCS DVD | O | Chip select signal output to the DVD decoder |
| 13 | VSS | — | Ground terminal (digital system) |
| 14 to 21 | D0 to D7 | I/O | Two-way data bus with the DVD decoder |
| 22 | INIT0 DVD | I | Interrupt signal input from the DVD decoder |
| 23 | INIT1 DVD | I | Interrupt signal input from the DVD decoder |
| 24 | SCK DSD | O | Serial data transfer clock signal output to the DSD decoder |
| 25 | XRST DVD | O | Reset signal output to the DVD decoder "L": reset |
| 26 | SCOR | I | Subcode sync (S0+S1) detection signal input from the digital signal processor |
| 27 | LAT CD | O | Serial data latch pulse signal output to the digital signal processor |
| 28 | LD ON | O | Laser diode on/off control signal output to the DVD/CD RF amplifier<br>"L": laser diode off, "H": laser diode on |
| 29 | MIRR | I | Mirror signal input from the digital signal processor |
| 30 | COUT CD | I | Numbers of track counted signal input from the digital signal processor |
| 31 | INLIM | I | Detection signal input from limit in switch The optical pick-up is inner position when "H" |
| 32 | CS ZIVA | O | Chip select signal output to the DVD system processor |
| 33 | SI ZIVA | I | Serial data input from the DVD system processor |
| 34 | SO ZIVA | O | Serial data output to the DVD system processor |
| 35 | SCK ZIVA | O | Serial data transfer clock signal output to the DVD system processor |
| 36 | DRVIRQ | O | Interrupt request signal output to the DVD system processor |
| 37 | DRVRDY | O | Ready signal output to the DVD system processor |
| 38 | RST | I | System reset signal input from the DVD system processor "L": reset |
| 39 | VSS | — | Ground terminal (digital system) |
| 40 | XTAL | I | System clock input terminal (20 MHz) |
| 41 | EXTAL | O | System clock output terminal (20 MHz) |
| 42 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 43, 44 | SLED A, SLED B | O | Sled motor drive signal output |
| 45 | JIT OFFSET | O | Output terminal for offset adjustment of APEO (⑩⑨pin of DVD decoder) |
| 46 | SDOUT DSD | O | Serial data output to the DSD decoder |
| 47 | SDIN DSD | I | Serial data input from the DSD decoder |
| 48 | READY DSD | I | Ready signal input from the DSD decoder "L": ready |
| 49 | DATA CD | O | Serial data output to the digital signal processor |
| 50 | CLOK CD | O | Serial data transfer clock signal output to the digital signal processor |
| 51 | XMSLAT | O | Serial data latch pulse signal output to the DSD decoder |
| 52 | SQSO | I | Subcode Q data input from the digital signal processor |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 53 | MUTE DSD | O | Muting on/off control signal output to the DSD decoder "H": muting on |
| 54 | SQCK | O | Subcode Q data reading clock signal output to the digital signal processor |
| 55 | VSS | — | Ground terminal (digital system) |
| 56 | TRAY IN | I | Disc tray in detection signal input terminal Not used |
| 57 | TRAY OUT | I | Disc tray out detection signal input terminal Not used |
| 58 | GFS DVD | I | Guard frame sync signal input from the DVD decoder |
| 59 | MUTE CD | O | Muting on/off control signal output to the digital signal processor "H": muting on |
| 60 | MUTE 2D | O | Muting on/off control signal output to the motor/coil driver "H": muting on |
| 61 | SLED | I | Sled motor servo drive PWM signal input terminal |
| 62 | FG | I | Spindle motor control signal input |
| 63 | SP ON | O | Muting on/off control signal output to the motor/coil driver "H": muting on |
| 64 | JIT | I | Jitter signal input |
| 65 | TE | I | Tracking error signal input from the DVD/CD RF amplifier |
| 66 | PI | I | Pull in signal input from the DVD/CD RF amplifier |
| 67 | FE | I | Focus error signal input from the DVD/CD RF amplifier |
| 68 | AVSS | — | Ground terminal (for A/D converter) |
| 69 | AVREF | I | Reference voltage input terminal (for A/D converter) |
| 70 | AVDD | — | Power supply terminal (+3.3V) (for A/D converter) |
| 71 | GFS CD | I | Guard frame sync signal input from the digital signal processor |
| 72 | SCLK CD | O | SENSE serial data reading clock signal output to the digital signal processor |
| 73 | TSD-M | O | Thermal shut down signal output to the motor/coil driver |
| 74 | FOK CD | I | Focus OK signal input from the digital signal processor |
| 75 | LOCK CD | I | GFS is sampled by 460 Hz "H" input when GFS is "H" |
| 76 | LDSEL | O | Laser diode selection signal output |
| 77 | SACD/$\overline{\text{DVD}}$ | O | SACD/DVD selection signal output "L": DVD, "H": SACD |
| 78 | I2C SIO | I/O | Communication data bus with the DVD system processor and system controller |
| 79 | IIC-CLK | I/O | Communication data reading clock signal input or transfer clock signal output with the DVD system processor and system controller |
| 80 | RXD | I | Serial data input from the RS-232C (for check) |
| 81 | TXD | O | Serial data output to the RS-232C (for check) |
| 82 | SDCLK RF | O | Serial data transfer clock signal output to the DVD/CD RF amplifier |
| 83 | SDATA RF | I/O | Two-way data bus with the DVD/CD RF amplifier |
| 84 | XWR | O | Write strobe signal output to the DVD decoder |
| 85 | XRD | O | Read strobe signal output to the DVD decoder |
| 86 | (PWE) | — | Not used |
| 87 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 88 | VSS | — | Ground terminal (digital system) |
| 89 to 96 | A0 to A7 | O | Address signal output to the DVD decoder |
| 97 | A8 | O | Motor/coil driver power save control signal output terminal Not used |
| 98 | XDRST | O | Reset signal output to the digital signal processor "L": reset |
| 99 | EEP WP | O | Write protect signal output to the EEPROM |
| 100 | EEP CLK | I | Clock signal output to the EEPROM |

**DMB08 BOARD IC401 CXD3068Q (DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR)**

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | DVDD0 | — | Power supply terminal (+3.3V) (digital system) |
| 2 | XRST | I | Reset signal input from the mechanism controller "L": reset |
| 3 | MUTE | I | Muting on/off control signal input from the mechanism controller "H": muting on |
| 4 | DATA | I | Serial data input from the mechanism controller |
| 5 | XLAT | I | Serial data latch pulse signal input from the mechanism controller |
| 6 | CLOK | I | Serial data transfer clock signal input from the mechanism controller |
| 7 | SENS | O | Internal status (SENSE) signal output to the mechanism controller |
| 8 | SCLK | I | SENSE serial data reading clock signal input from the mechanism controller |
| 9 | ATSK | I/O | Input/output terminal for anti-shock Not used |
| 10 | WFCK | O | Write frame clock signal output to the DVD decoder |
| 11 | RFCK | O | RFCK signal output terminal Not used |
| 12 | XPCK | O | XPCK signal output terminal Not used |
| 13 | GFS | O | Guard frame sync signal output to the mechanism controller |
| 14 | C2PO | O | C2 pointer signal output to the DVD decoder |
| 15 | SCOR | O | Subcode sync (S0+S1) detection signal output to the DVD decoder and mechanism controller |
| 16 | C4M | O | 4.2336 MHz clock signal output terminal Not used |
| 17 | WDCK | O | Guard subcode sync (S0+S1) detection signal output to the DVD decoder |
| 18 | DVSS0 | — | Ground terminal (digital system) |
| 19 | COUT | O | Numbers of track counted signal output to the mechanism controller |
| 20 | MIRR | O | Mirror signal output to the mechanism controller |
| 21 | DFCT | I/O | Defect signal input/output terminal Not used |
| 22 | FOK | O | Focus OK signal output to the mechanism controller |
| 23 | PWMI | I | Spindle motor external control signal input terminal Not used |
| 24 | LOCK | O | GFS is sampled by 460 Hz "H" output when GFS is "H" |
| 25 | MDP | O | Spindle motor servo drive signal output to the DVD decoder |
| 26 | SSTP | I | Detection signal input from limit in switch The optical pick-up is inner position when "H" |
| 27 | FSTO | O | 2/3 divider output terminal Not used |
| 28 | DVDD1 | — | Power supply terminal (+3.3V) (digital system) |
| 29 | SFDR | O | Sled servo drive PWM signal (+) output |
| 30 | SRDR | O | Sled servo drive PWM signal (–) output |
| 31 | TFDR | O | Tracking servo drive PWM signal (+) output |
| 32 | TRDR | O | Tracking servo drive PWM signal (–) output |
| 33 | FFDR | O | Focus servo drive PWM signal (+) output |
| 34 | FRDR | O | Focus servo drive PWM signal (–) output |
| 35 | DVSS1 | — | Ground terminal (digital system) |
| 36 | TEST | I | Input terminal for the test |
| 37 | TES1 | I | Input terminal for the test |
| 38 | VC | I | Middle point voltage (+1.65V) input terminal |
| 39 | FE | I | Focus error signal input from the DVD/CD RF amplifier |
| 40 | SE | I | Sled error signal input from the DVD/CD RF amplifier |
| 41 | TE | I | Tracking error signal input from the DVD/CD RF amplifier |
| 42 | CE | I | Middle point servo analog signal input |
| 43 | RFDC | I | RF signal input from the DVD/CD RF amplifier |
| 44 | ADIO | O | Output terminal for the test Not used |
| 45 | AVSS0 | — | Ground terminal (analog system) |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 46 | IGEN | I | Stabilized current input for operational amplifiers |
| 47 | AVDD0 | — | Power supply terminal (+3.3V) (analog system) |
| 48 | ASYO | O | EFM full-swing output terminal |
| 49 | ASYI | I | Asymmetry comparator voltage input terminal |
| 50 | RFAC | I | EFM signal input from the DVD/CD RF amplifier |
| 51 | AVSS1 | — | Ground terminal (analog system) |
| 52 | CLTV | I | Internal VCO control voltage input terminal |
| 53 | FILO | O | Filter output for master PLL |
| 54 | FILI | I | Filter input for master PLL |
| 55 | PCO | O | Charge pump output for master PLL |
| 56 | AVDD1 | — | Power supply terminal (+3.3V) (analog system) |
| 57 | BIAS | I | Asymmetry circuit constant current input terminal |
| 58 | VCTL | I | VCO control voltage input terminal for the wideband EFM PLL Not used |
| 59 | V16M | O | VCO oscillation output terminal for the wideband EFM PLL Not used |
| 60 | VPCO | O | Charge pump output terminal for the wideband EFM PLL Not used |
| 61 | DVDD2 | — | Power supply terminal (+3.3V) (digital system) |
| 62 | ASYE | I | Asymmetry circuit on/off control signal input terminal “L”: off, “H”: on Not used |
| 63 | MD2 | I | Digital out on/off control signal input from the mechanism controller<br>“L”: digital out off, “H”: digital out on |
| 64 | DOUT | O | Digital audio signal output to the digital audio interface IC |
| 65 | LRCK | O | L/R sampling clock signal (44.1 kHz) output to the DVD decoder |
| 66 | PCMD | O | Serial data output to the DVD decoder |
| 67 | BCLK | O | Bit clock signal (2.8224 MHz) output to the DVD decoder |
| 68 | EMPH | O | “L” is output when playback disc is emphasis off<br>“H” is output when playback disc is emphasis on Not used |
| 69 | XTSL | I | Input terminal for the system clock frequency setting<br>“L”: 16.9344 MHz, “H”: 33.8688MHz |
| 70 | DVSS2 | — | Ground terminal (digital system) |
| 71 | XTAI | I | System clock input terminal (33.8688 MHz) |
| 72 | XTAO | O | System clock output terminal (33.8688 MHz) Not used |
| 73 | SOUT | O | Serial data output terminal Not used |
| 74 | SOCK | O | Serial data reading clock signal output terminal Not used |
| 75 | XOLT | O | Serial data latch pulse signal output terminal Not used |
| 76 | SQSO | O | Subcode Q data output to the mechanism controller |
| 77 | SQCK | I | Subcode Q data reading clock signal input from the mechanism controller |
| 78 | SCSY | I | Input terminal for resynchronism of guard subcode sync (S0+S1) Not used |
| 79 | SBSO | O | Subcode serial data output to the DVD decoder |
| 80 | EXCK | I | Subcode serial data reading clock signal input to the DVD decoder |

**DMB08 BOARD IC607 CXD9718BQ (AUDIO DIGITAL SIGNAL PROCESSOR)**

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | VSS | — | Ground terminal |
| 2 | XRST | I | Reset signal input from the system controller "L": reset |
| 3 | EXTIN | I | Master clock signal input terminal Not used |
| 4 | FS2 | I | Sampling frequency selection signal input terminal Not used |
| 5 | VDDI | — | Power supply terminal (+2.6V) |
| 6 | FS1 | I | Sampling frequency selection signal input terminal Not used |
| 7 | PLOCK | O | Internal PLL lock signal output terminal Not used |
| 8 | VSS | — | Ground terminal |
| 9 | MCLK1 | I | System clock signal input terminal (13.5 MHz) |
| 10 | VDDI | — | Power supply terminal (+2.6V) |
| 11 | VSS | — | Ground terminal |
| 12 | MCLK2 | O | System clock signal output terminal (13.5 MHz) |
| 13 | MS | I | Master/slave selection signal input terminal<br>"L": slave, "H": master (fixed at "L" in this set) |
| 14 | SCKOUT | O | Internal system clock signal output to the D/A converter and stream processor |
| 15 | LRCKI1 | I | L/R sampling clock signal (44.1 kHz) input from the digital audio processor |
| 16 | VDDE | — | Power supply terminal (+3.3V) |
| 17 | BCKI1 | I | Bit clock signal (2.8224 MHz) input from the digital audio processor |
| 18 | SDI1 | I | Front L-ch and R-ch audio serial data input from the digital audio processor |
| 19 | LRCKO | O | L/R sampling clock signal (44.1 kHz) output to the D/A converter and stream processor |
| 20 | BCKO | O | Bit clock signal (2.8224 MHz) output to the D/A converter and stream processor |
| 21 | VSS | — | Ground terminal |
| 22 | KFSIO | I | Audio clock signal (11.2896 MHz) input from the digital audio processor |
| 23 | SDO1 | O | Front L-ch and R-ch audio serial data output to the stream processor |
| 24 | SDO2 | O | Center and woofer audio serial data output to the stream processor |
| 25 | SDO3 | O | Rear L-ch and R-ch audio serial data output to the stream processor |
| 26 | SDO4 | O | Audio serial data output to the D/A converter |
| 27 | SPDIF | O | S/PDIF signal output terminal Not used |
| 28 | LRCKI2 | I | L/R sampling clock signal (44.1 kHz) input from the A/D converter |
| 29 | BCKI2 | I | Bit clock signal (2.8224 MHz) input from the A/D converter |
| 30 | SDI2 | I | Center and woofer audio serial data input from the digital audio processor |
| 31 | VSS | — | Ground terminal |
| 32 | HACN | O | Acknowledge signal output to the system controller |
| 33 | HDIN | I | Write data input from the system controller |
| 34 | HCLK | I | Clock signal input from the system controller |
| 35 | HDOUT | O | Read data output to the system controller |
| 36 | HCS | I | Chip select signal input from the system controller |
| 37 | SDCLK | O | Clock signal output terminal Not used |
| 38 | CLKEN | O | Clock enable signal output terminal Not used |
| 39 | RAS | O | Row address strobe signal output terminal Not used |
| 40 | VDDI | — | Power supply terminal (+2.6V) |
| 41 | VSS | — | Ground terminal |
| 42 | CAS | O | Column address strobe signal output terminal Not used |
| 43 | DQM/OE0 | O | Output terminal of data input/output mask Not used |
| 44 | CS0 | O | Chip select signal output to the S-RAM |
| 45 | WE0 | O | Write enable signal output to the S-RAM |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 46 | VDDE | — | Power supply terminal (+3.3V) |
| 47 | WMD1 | I | S-RAM wait mode setting terminal Fixed at “H” in this set |
| 48 | VSS | — | Ground terminal |
| 49 | WMD0 | I | S-RAM wait mode setting terminal Fixed at “H” in this set |
| 50 | PAGE2 | O | Page selection signal output terminal Not used |
| 51 | VSS | — | Ground terminal |
| 52, 53 | PAGE1, PAGE0 | O | Page selection signal output terminal Not used |
| 54 | BOOT | I | Boot mode control signal input terminal Not used |
| 55 | BTACT | O | Boot mode state display signal output terminal Not used |
| 56 | BST | I | Boot strap signal input from the system controller |
| 57 | MOD1 | I | PLL input frequency selection signal input terminal<br>“L”: 384fs, “H”: 256fs (fixed at “H” in this set) |
| 58 | MOD0 | I | Mode setting terminal<br>“L”: single chip mode, “H”: use prohibition (fixed at “L” in this set) |
| 59 | EXLOCK | I | PLL lock error and data error flag input from the digital audio interface IC |
| 60 | VDDI | — | Power supply terminal (+2.6V) |
| 61 | VSS | — | Ground terminal |
| 62, 63 | A17, A16 | O | Address signal output terminal Not used |
| 64 to 66 | A15 to A13 | O | Address signal output to the S-RAM |
| 67 | GP10 | O | L/R sampling clock signal (44.1 kHz) output to the D/A converter and stream processor |
| 68 | GP9 | O | Decode signal output to the system controller |
| 69 | GP8 | I | Bit 1 input terminal of channel status from the digital audio interface IC |
| 70 | VDDI | — | Power supply terminal (+2.6V) |
| 71 | VSS | — | Ground terminal |
| 72 to 75 | D15 to D12 | I/O | Two-way data bus with the S-RAM |
| 76 | VDDE | — | Power supply terminal (+3.3V) |
| 77 to 80 | D11 to D8 | I/O | Two-way data bus with the S-RAM |
| 81 | VSS | — | Ground terminal |
| 82 to 85 | A9, A12 to A10 | O | Address signal output to the S-RAM |
| 86 | TDO | O | Simple emulation data output terminal Not used |
| 87 | TMS | I | Simple emulation data input start/end detection signal input terminal Not used |
| 88 | XTRST | I | Simple emulation asychronous break input terminal Not used |
| 89 | TCK | I | Simple emulation clock signal input terminal Not used |
| 90 | TDI | I | Simple emulation data input terminal Not used |
| 91 | VSS | — | Ground terminal |
| 92 to 97 | A8 to A3 | O | Address signal output to the S-RAM |
| 98, 99 | D7, D6 | I/O | Two-way data bus with the S-RAM |
| 100 | VDDI | — | Power supply terminal (+2.6V) |
| 101 | VSS | — | Ground terminal |
| 102 to 105 | D5 to D2 | I/O | Two-way data bus with the S-RAM |
| 106 | VDDE | — | Power supply terminal (+3.3V) |
| 107, 108 | D1, D0 | I/O | Two-way data bus with the S-RAM |
| 109, 110 | A2, A1 | O | Address signal output to the S-RAM |
| 111 | VSS | — | Ground terminal |
| 112 | A0 | O | Address signal output to the S-RAM |
| 113 | PM | I | PLL reset signal input from the system controller “L”: reset |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 114 | SDI3 | I | Rear L-ch and R-ch audio serial data input from the digital audio processor |
| 115 | SDI4 | I | Audio serial data input terminal Not used |
| 116 | SYNC | I | Synchronous/asychronous selection signal input terminal<br>“L”: Synchronous, “H”: asynchronous (fixed at “H” in this set) |
| 117 to 119 | VSS | — | Ground terminal |
| 120 | VDDI | — | Power supply terminal (+2.6V) |

**DMB08 BOARD IC701 TMC57929PGF-RDP (DVD DECODER)**

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1, 2 | D5, D6 | I/O | Two-way data bus with the mechanism controller |
| 3 | VSS | — | Ground terminal (digital system) |
| 4 | D7 | I/O | Two-way data bus with the mechanism controller |
| 5 | A0 | I | Address signal input from the mechanism controller |
| 6 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 7 | A1 | I | Address signal input from the mechanism controller |
| 8 | VDD5V | — | Power supply terminal (+5V) |
| 9 to 14 | A2 to A7 | I | Address signal input from the mechanism controller |
| 15 | VSS | — | Ground terminal (digital system) |
| 16 | XWAIT | O | Wait signal output terminal Not used |
| 17 | XRD | I | Read strobe signal input from the mechanism controller |
| 18 | XWR | I | Write strobe signal input from the mechanism controller |
| 19 | XCS | I | Chip select signal input from the mechanism controller |
| 20, 21 | XINT0, XINT1 | O | Interrupt signal output to the mechanism controller |
| 22 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 23 | XHRS | I | Not used |
| 24 | HDB7 | O | Stream data signal output to the DSD decoder and DVD system processor |
| 25 | VSS | — | Ground terminal (digital system) |
| 26 | HDB8 | O | Error flag signal output to the DSD decoder and DVD system processor |
| 27 | HDB6 | O | Stream data signal output to the DSD decoder and DVD system processor |
| 28 | VDDS | — | Power supply terminal (+5V) (digital system) |
| 29 | HDB9 | O | Not used |
| 30 | HDB5 | O | Stream data signal output to the DSD decoder and DVD system processor |
| 31 | HDBA | O | Not used |
| 32 | HDB4 | O | Stream data signal output to the DSD decoder and DVD system processor |
| 33 | VSS | — | Ground terminal (digital system) |
| 34 | HDBB | O | Not used |
| 35 | HDB3 | O | Stream data signal output to the DSD decoder and DVD system processor |
| 36 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 37 | HDBC | O | Not used |
| 38 | VDDS | — | Power supply terminal (+5V) (digital system) |
| 39 | HDB2 | O | Stream data signal output to the DSD decoder and DVD system processor |
| 40 | HDBD | O | Not used |
| 41 | HDB1 | O | Stream data signal output to the DSD decoder and DVD system processor |
| 42 | VSS | — | Ground terminal (digital system) |
| 43 | HDBE | O | Not used |
| 44 | HDB0 | O | Stream data signal output to the DSD decoder and DVD system processor |
| 45 | HDBF | O | Not used |
| 46 | XDRQ | O | Serial data effect flag signal output to the DSD decoder and DVD system processor |
| 47 | VDDS | — | Power supply terminal (+5V) (digital system) |
| 48 | XHWR | O | Serial data transfer clock signal output to the DSD decoder and DVD system processor |
| 49 | XHRD | O | Header flag signal output to the DSD decoder |
| 50 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 51 | REDY | O | Not used |
| 52 | VSS | — | Ground terminal (digital system) |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 53 | XHAC | I | DVD mode: Serial data request signal input from the DVD system processor<br>SACD mode: Serial data request signal input from the DSD decoder |
| 54 | HINT | O | Not used |
| 55 | XS16 | O | Not used |
| 56 | HA1 | I | Not used |
| 57 | XPDI | I/O | Not used |
| 58 | VDDS | — | Power supply terminal (+5V) (digital system) |
| 59, 60 | HA0, HA2 | I | Not used |
| 61 | VSS | — | Ground terminal (digital system) |
| 62, 63 | HCS0, HCS1 | I | Not used |
| 64 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 65 | DASP | I/O | Not used |
| 66 to 69 | MDB0 to MDB3 | I/O | Two-way data bus with the D-RAM |
| 70 | VSS | — | Ground terminal (digital system) |
| 71 | MDB4 | I/O | Two-way data bus with the D-RAM |
| 72 | VDD5V | — | Power supply terminal (+5V) |
| 73 to 75 | MDB5 to MDB7 | I/O | Two-way data bus with the D-RAM |
| 76 | XMWR | O | Write enable signal output to the D-RAM |
| 77 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 78 | XRAS | O | Row address strobe signal output to the D-RAM |
| 79, 80 | MA0, MA1 | O | Address signal output to the D-RAM |
| 81 | VSS | — | Ground terminal (digital system) |
| 82 to 87 | MA2 to MA7 | O | Address signal output to the D-RAM |
| 88 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 89 | MA8 | O | Address signal output to the D-RAM |
| 90 | VSS | — | Ground terminal (digital system) |
| 91 | MA9 | O | Address signal output to the D-RAM |
| 92 | MNT1 | O | EEPROM ready signal output to the mechanism controller |
| 93 | MNT2 | O | Operation clock signal output for PSP physical disc mark detection to DSD decoder |
| 94 | XMOE | O | Output enable signal output to the D-RAM |
| 95 | XCAS | O | Column address strobe signal output to the D-RAM |
| 96, 97 | MDB8, MDB9 | I/O | Two-way data bus with the D-RAM |
| 98 | VSS | — | Ground terminal (digital system) |
| 99 | MDBA | I/O | Two-way data bus with the D-RAM |
| 100 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 101, 102 | MDBB, MDBC | I/O | Two-way data bus with the D-RAM |
| 103 | VDD5V | — | Power supply terminal (+5V) |
| 104 to 106 | MDBD to MDBF | I/O | Two-way data bus with the D-RAM |
| 107 | GFS | O | Guard frame sync signal output to the mechanism controller |
| 108 | VSS | — | Ground terminal (digital system) |
| 109 | APEO | O | Absolute phase error signal output |
| 110 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 111 | DASYO | O | RF binary signal output |
| 112 | GNDA5 | — | Ground terminal (analog system) |
| 113, 114 | ASF1, AFS2 | — | Filter connected terminal for selection the constant asymmetry compensation |
| 115 | DASYI | I | Analog signal input after integrated from the RF binary signal |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 116 | RFDCC | I | Input terminal for adjusting DC cut high-pass filter for RF signal Not used |
| 117 | RFIN | I | RF signal input from the DVD/CD RF amplifier |
| 118, 119 | VCCA5, VCCA4 | — | Power supply terminal (+3.3V) (analog system) |
| 120 | VCOR1 | — | VCO oscillating range setting resistor connected terminal |
| 121 | VCOIN | I | VCO input terminal |
| 122, 123 | GNDA4, GNDA3 | — | Ground terminal (analog system) |
| 124 | LPF5 | O | Signal output from the operation amplifier from PLL loop filter |
| 125 | VC1 | I | Middle point voltage (+1.65V) input terminal |
| 126, 127 | LPF2, LPF1 | I | Inverted signal input to the operation amplifier from PLL loop filter |
| 128, 129 | VCCA3, VCCA2 | — | Power supply terminal (+3.3V) (analog system) |
| 130 | PDO | O | Signal output from the charge pump for phase comparator |
| 131 | PDHVCC | I | Middle point voltage input terminal for RF PLL |
| 132 | FDO | O | Signal output from the charge pump for frequency comparator |
| 133, 134 | GNDA2, GNDA1 | — | Ground terminal (analog system) |
| 135 | SPO | O | Spindle motor control signal output |
| 136 | VC2 | I | Middle point voltage (+1.65V) input terminal |
| 137 | MDIN2 | I | Spindle motor servo drive signal input |
| 138 | MDIN1 | I | MDP input terminal |
| 139 | VCCA1 | — | Power supply terminal (+3.3V) (analog system) |
| 140 | CLVS | O | Control signal output for selection the spindle control filter constant at CLVS |
| 141 | VSS | — | Ground terminal (digital system) |
| 142 | MDSOUT | O | Frequency error output terminal of internal CLV circuit |
| 143 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 144 | MDPOUT | O | Phase error output terminal of internal CLV circuit |
| 145 | DFCT | I | Defect signal input terminal Not used |
| 146 | GSCOR | I | Guard subcode sync (S0+S1) detection signal input from the digital signal processor |
| 147 | EXCK | O | Subcode serial data reading clock signal output to the digital signal processor |
| 148 | SBIN | I | Subcode serial data input from the digital signal processor |
| 149 | VSS | — | Ground terminal (digital system) |
| 150 | SCOR | I | Sucode sync (S0+S1) detection signal input from the digital signal processor |
| 151 | WFCK | I | Write frame clock signal input from the digital signal processor |
| 152 | VDD5V | — | Power supply terminal (+5V) |
| 153 | XRCI | I | RAM overflow signal input terminal Not used |
| 154 | VDDS | — | Power supply terminal (+5V) (digital system) |
| 155 | C2PO | I | C2 pointer signal input from the digital signal processor |
| 156 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 157 | DBCK | O | Bit clock signal (2.8224 MHz) output terminal Not used |
| 158 | BCLK | I | Bit clock signal (2.8224 MHz) input from the digital signal processor |
| 159 | DDAT | O | PCM data output terminal Not used |
| 160 | MDAT | I | Serial data input from the digital signal processor |
| 161 | VSS | — | Ground terminal (digital system) |
| 162 | DLRC | O | L/R sampling clock signal (44.1 kHz) output terminal Not used |
| 163 | LRCK | I | L/R sampling clock signal (44.1 kHz) input from the digital signal processor |
| 164 | XRST | I | Reset signal input from the mechanism controller “L”: reset |
| 165 | IFS0 | I | Interface selection signal input terminal Fixed at “L” in this set |
| 166 | IFS1 | I | Interface selection signal input terminal Fixed at “H” in this set |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 167 | XTAL | I | 33.8688 MHz clock signal input terminal |
| 168 | VSS | — | Ground terminal (digital system) |
| 169 | XTL2 | O | System clock output terminal (33.8688 MHz) |
| 170 | XTL1 | I | System clock input terminal (33.8688 MHz) |
| 171 | VDD | — | Power supply terminal (+3.3V) (digital system) |
| 172 to 176 | D0 to D4 | I/O | Two-way data bus with the mechanism controller |

**DMB08 BOARD IC801 CXD2753R (DSD DECODER)**

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | VSCA0 | — | Ground terminal (for core) |
| 2 | XMSLAT | I | Serial data latch pulse signal input from the mechanism controller |
| 3 | MSCK | I | Serial data transfer clock signal input from the mechanism controller |
| 4 | MSDATI | I | Serial data input from the mechanism controller |
| 5 | VDCA0 | — | Power supply terminal (+2.5V) (for core) |
| 6 | MSDATO | O | Serial data output to the mechanism controller |
| 7 | MSREADY | O | Ready signal output to the mechanism controller “L”: ready |
| 8 | XMSDOE | O | Serial data output enable signal output terminal Not used |
| 9 | XRST | I | Reset signal input from the mechanism controller “L”: reset |
| 10 | SMUTE | I | Soft muting on/off control signal input from the mechanism controller “H”: muting on |
| 11 | MCKI | I | Master clock signal (33.8688 MHz) input |
| 12 | VSIOA0 | — | Ground terminal (for I/O) |
| 13 | EXCKO1 | O | Master clock signal (33.8688 MHz) output to the digital audio processor |
| 14 | EXCKO2 | O | External clock 2 signal output terminal Not used |
| 15 | LRCK | O | L/R sampling clock signal (44.1kHz) output terminal Not used |
| 16 | F75HZ | O | Not used |
| 17 | VDIOA0 | — | Power supply terminal (+3.3V) (for I/O) |
| 18 to 25 | MNT0 to MNT7 | O | Monitor signal output terminal Not used |
| 26 | TCK | I | Clock signal input from the DVD system processor |
| 27 | TDI | I | Serial data input from the DVD system processor |
| 28 | VSCA1 | — | Ground terminal (for core) |
| 29 | TDO | O | Serial data output to the DVD system processor |
| 30 | TMS | I | TMS signal input from the DVD system processor |
| 31 | TRST | I | Reset signal input from the DVD system processor “L”: reset |
| 32 to 34 | TEST1 to TEST3 | I | Input terminal for the test (normally: fixed at “L”) |
| 35 | VDCA1 | — | Power supply terminal (+2.5V) (for core) |
| 36 | UBIT | O | Not used |
| 37 | XBIT | O | Not used |
| 38 to 41 | SUPDT0 to SUPDT3 | O | Supplementary data output terminal Not used |
| 42 | VSIOA1 | — | Ground terminal (for I/O) |
| 43, 44 | SUPDT4, SUPDT5 | O | Supplementary data output terminal Not used |
| 45 | VDIOA1 | — | Power supply terminal (+3.3V) (for I/O) |
| 46, 47 | SUPDT6, SUPDT7 | O | Supplementary data output terminal Not used |
| 48 | SUPEN | O | Supplementary data enable signal output terminal Not used |
| 49 | VSCA2 | — | Ground terminal (for core) |
| 50 | NC | O | Not used |
| 51, 52 | TEST4, TEST5 | I | Input terminal for the test (normally: fixed at “L”) |
| 53 | NC | O | Not used |
| 54 | VDCA2 | — | Power supply terminal (+2.5V) (for core) |
| 55, 56 | NC | O | Not used |
| 57 | BCKASL | I | Input/output selection signal input terminal of bit clock signal (2.8224 MHz) for DSD data output “L”: input (slave), “H”: output (master) Fixed at “H” in this set |
| 58 | VSDSD0 | — | Ground terminal (for DSD data output) |
| 59 | BCKAI | I | Bit clock signal (2.8224 MHz) input terminal for DSD data output Not used |
| 60 | BCKAO | O | Bit clock signal (2.8224 MHz) output terminal for DSD data output |
| 61 | PHREFI | I | Bit clock signal (2.8224 MHz) input terminal for DSD data output Not used |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 62 | PHREFO | O | Bit clock signal (2.8224 MHz) output to the digital audio processor Not used |
| 63 | ZDFL | O | Front L-ch Zero data flag detection signal output terminal Not used |
| 64 | DSAL | O | Front L-ch DSD data output to the digital audio processor |
| 65 | ZDFR | O | Front R-ch Zero data flag detection signal output terminal Not used |
| 66 | DSAR | O | Front R-ch DSD data output to the digital audio processor |
| 67 | VDDSD0 | — | Power supply terminal (+3.3V) (for DSD data output) |
| 68 | ZDFC | O | Center zero data flag detection signal output terminal Not used |
| 69 | DSAC | O | Center DSD data output to the digital audio processor |
| 70 | ZDFLFE | O | Woofer zero data flag detection signal output terminal Not used |
| 71 | DSALFE | O | Woofer DSD data output to the digital audio processor |
| 72 | VSDSD1 | — | Ground terminal (for DSD data output) |
| 73 | ZDFLS | O | Rear L-ch zero data flag detection signal output terminal Not used |
| 74 | DSALS | O | Rear L-ch DSD data output to the digital audio processor |
| 75 | ZDFRS | O | Rear R-ch zero data flag detection signal output terminal Not used |
| 76 | DSARS | O | Rear R-ch DSD data output to the digital audio processor |
| 77 | VDDSD | — | Power supply terminal (+3.3V) (For DSD data output) |
| 78, 79 | IOUT0, IOUT1 | O | Data output terminal for IEEE 1394 link chip interface Not used |
| 80 | VSCB0 | — | Ground terminal (for core) |
| 81, 82 | IOUT2, IOUT3 | O | Data output terminal for IEEE 1394 link chip interface Not used |
| 83 | VDCB0 | — | Power supply terminal (+2.5V) (for core) |
| 84, 85 | IOUT4, IOUT5 | O | Data output terminal for IEEE 1394 link chip interface Not used |
| 86 | VSIOB0 | — | Ground terminal (for I/O) |
| 87 | IANCO | O | Transmission information data output terminal for IEEE 1394 link chip interface Not used |
| 88 | IFULL | I | Data transmission hold request signal input terminal for IEEE 1394 link chip interface Not used |
| 89 | IEMPTY | I | High speed transmission request signal input terminal for IEEE 1394 link chip interface Not used |
| 90 | VDIOB0 | — | Power supply terminal (+3.3V) (for I/O) |
| 91 | IFRM | O | Frame reference signal output terminal for IEEE 1394 link chip interface Not used |
| 92 | IOUTE | O | Enable signal output terminal for IEEE 1394 link chip interface Not used |
| 93 | IBCK | O | Data transmission clock signal output terminal for IEEE 1394 link chip interface Not used |
| 94 | VSCB1 | — | Ground terminal (for core) |
| 95 | IERR | I | Not used |
| 96 | IANCI | I | Not used |
| 97 | IPLAN | I | Not used |
| 98 | IHOLD | O | Not used |
| 99 | VDCB1 | — | Power supply terminal (+2.5V) (for core) |
| 100 | IVLD | I | Not used |
| 101 to 105 | IDIN0 to IDIN4 | I | Not used |
| 106 | VSIOB1 | — | Ground terminal (for I/O) |
| 107 to 109 | IDIN5 to IDIN7 | I | Not used |
| 110 | VDIOB1 | — | Power supply terminal (+3.3V) (for I/O) |
| 111 to 114 | WAD0 to WAD3 | I | External A/D data input terminal for PSP physical disc mark detection Not used |
| 115 | TESTI | I | Input terminal for the test (normally: fixed at “L”) |
| 116 | VSCB2 | — | Ground terminal (for core) |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 117 to 120 | WAD4 to WAD7 | I | External A/D data input terminal for PSP physical disc mark detection Not used |
| 121 | VDCB2 | — | Power supply terminal (+2.5V) (for core) |
| 122 | WRFD | I | Not used |
| 123 | WCK | I | Operation clock signal input for PSP physical disc mark detection from the DVD decoder |
| 124, 125 | WAVDD0, WAVDD1 | — | A/D power supply terminal (+2.5V) (for PSP physical disc mark detection) |
| 126 | WARFI | I | Analog RF signal input for PSP physical disc mark detection from the DVD/CD RF amplifier |
| 127 | WAVRB | I | A/D bottom reference terminal for PSP physical disc mark detection |
| 128, 129 | WAVSS0, WAVSS1 | — | A/D ground terminal (for PSP physical disc mark detection) |
| 130 | VSIO | — | Ground terminal (for I/O) |
| 131 to 134 | DQ7 to DQ4 | I/O | Two-way data bus with the SD-RAM |
| 135 | VDIOA2 | — | Power supply terminal (+3.3V) (for I/O) |
| 136 to 139 | DQ3 to DQ0 | I/O | Two-way data bus with the SD-RAM |
| 140 | VSIOA3 | — | Ground terminal (for I/O) |
| 141 | DCLK | O | Clock signal output to the SD-RAM |
| 142 | DCKE | O | Clock enable signal output to the SD-RAM |
| 143 | XWE | O | Write enable signal output to the SD-RAM |
| 144 | XCAS | O | Column address strobe signal output to the SD-RAM |
| 145 | XRAS | O | Row address strobe signal output to the SD-RAM |
| 146 | VDIOA3 | — | Power supply terminal (+3.3V) (for I/O) |
| 147 | NC | O | Not used |
| 148, 149 | A11, A10 | O | Address signal output to the SD-RAM |
| 150 | VSCA3 | — | Ground terminal (for core) |
| 151, 152 | A9, A8 | O | Address signal output to the SD-RAM |
| 153 | VDCA3 | — | Power supply terminal (+2.5V) (for core) |
| 154 to 157 | A7 to A4 | O | Address signal output to the SD-RAM |
| 158 | VSIOA4 | — | Ground terminal (for I/O) |
| 159 to 162 | A3 to A0 | O | Address signal output to the SD-RAM |
| 163 | VDIOA4 | — | Power supply terminal (+3.3V) (for I/O) |
| 164 | XSRQ | O | Serial data request signal output to the DVD decoder |
| 165 | XSHD | I | Header flag signal input from the DVD decoder |
| 166 | SDCK | I | Serial data transfer clock signal input from the DVD decoder |
| 167 | XSAK | I | Serial data effect flag signal input from the DVD decoder |
| 168 | SDEF | I | Error flag signal input from the DVD decoder |
| 169 to 176 | SD0 to SD7 | I | Stream data signal input from the DVD decoder |

**DMB08 BOARD IC901 uPD703033BYGF-M59-3BA-A (SYSTEM CONTROLLER)**

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | DAMP-DATA | O | Serial data output to the stream processors |
| 2 | DAMP-CLK | O | Serial data transfer clock signal output to the stream processors |
| 3 | I2C-DATA | I/O | Communication data bus with the DVD system processor and mechanism controller |
| 4 | CQ-RST | O | Reset signal output to the DVD system processor "L": reset |
| 5 | I2C-CLK | I/O | Communication data reading clock signal input or transfer clock signal output with the DVD system processor and mechanism controller |
| 6 | DSP-DO | I | Write data input from the audio digital signal processor |
| 7 | DIG-DI | O | Read data output to the digital audio interface IC, audio digital signal processor and D/A converter |
| 8 | DIG-CLK | O | Clock signal output to the digital audio interface IC, audio digital signal processor and D/A converter |
| 9 | EVDD | — | Power supply terminal (+5V) |
| 10 | EVSS | — | Ground terminal |
| 11 | P-PWM | O | PWM voltage control signal output |
| 12 | DSP-RST | O | Reset signal output to the audio digital signal processor "L": reset |
| 13 | DSP-PM | O | PLL reset signal output to the audio digital signal processor "L": reset |
| 14 | DSP-CS | O | Chip select signal output to the audio digital signal processor |
| 15 | DSP-HACN | I | Acknowledge signal input from to the audio digital signal processor |
| 16 | DSP-BST | O | Boot strap signal output to the audio digital signal processor |
| 17 | DSP-GP9 | I | Decode signal input from to the audio digital signal processor |
| 18 | DIR-ZERO | I | Audio serial data input from the digital audio interface IC |
| 19 | DIR-ERR | I | PLL lock error and data error flag input from the digital audio interface IC |
| 20 | DIR-CE | O | Chip enable signal output to the digital audio interface IC |
| 21 | VPP | — | Power supply terminal (for programming) Not used |
| 22 | DIR-XST | I | Source clock switching monitor input from the digital audio interface IC |
| 23 | DIR-AD | O | Muting signal output |
| 24 | DIR-XMODE | O | System reset signal output to the digital audio interface IC "L": reset |
| 25 | DIRDO | I | Write data input from the digital audio interface IC |
| 26 | DAMP-RST | O | Reset signal output to the stream processors "L": reset |
| 27 | GP12 | — | Not used (fixed at "L") |
| 28 | DAMP-MUTEN | O | Muting on/off control signal output to the stream processors "H": muting on |
| 29 | CS1 | O | Chip select signal output to the stream processor (for front L-ch and R-ch) |
| 30 | CS2 | O | Chip select signal output to the stream processor (for center and woofer) |
| 31 | CS3 | O | Chip select signal output to the stream processor (for rear L-ch and R-ch) |
| 32 | DAC-CS | O | Chip select signal output to the D/A converter |
| 33 | AD-RST | O | Reset signal output to the A/D converter and D/A converter "L": reset |
| 34 | RESET | I | System reset signal input "L": reset<br>For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H" |
| 35 | XT1 | I | Sub system clock input terminal Not used (open) |
| 36 | XT2 | O | Sub system clock output terminal Not used (open) |
| 37 | REGC | — | Capacitance connection terminal |
| 38 | X2 | O | Main system clock output terminal (20 MHz) |
| 39 | X1 | I | Main system clock input terminal (20 MHz) |
| 40 | VSS | — | Ground terminal |
| 41 | VDD | — | Power supply terminal (+5V) |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 42 | CLKOUT | O | Clock signal output terminal Not used (open) |
| 43 | DIP-RST | O | Reset signal output to the power drivers "L": reset |
| 44 | DIP-OCP | I | Protect signal input from the over load detection circuit |
| 45 | ST-POWER | O | System power on/off control signal output "H": power on |
| 46 | HP-MUTE | O | Headphone muting on/off control signal output "L": muting on |
| 47 | AU-MUTE | O | Audio line muting on/off control signal output "L": muting on |
| 48 | VIDEO-MUTE | O | Video muting signal output |
| 49 | PROG SW | I | SCAN SELECT switch input terminal "L": SELECTABLE, "H": INTERLACE |
| 50 | FM750 | O | Power supply for tuner pack on/off control signal output |
| 51 | TUNED | I | Tuning detection signal input from the tuner unit "L": tuned |
| 52 | TUN-DI | I | Serial data input from the tuner unit |
| 53 | TUN-CE | O | Chip enable signal output to the tuner unit |
| 54 | TUN-DO | O | Serial data output to the tuner unit |
| 55 | TUN-CLK | O | Serial data transfer clock signal output to the tuner unit |
| 56 | FL-MUTE | O | Reset signal output to the fluorescent indicator tube driver "L": reset |
| 57 | FL-CLK | O | Serial data transfer clock signal output to the fluorescent indicator tube driver |
| 58 | BVDD | — | Power supply terminal (+5V) (for bus interface) |
| 59 | BVSS | — | Ground terminal (for bus interface) |
| 60 | FL-DATA | O | Serial data output to the fluorescent indicator tube driver |
| 61 | FL-CS | O | Chip select signal output to the fluorescent indicator tube driver "L" active |
| 62 | LED-CS | — | Not used |
| 63 | LED-CLR | — | Not used |
| 64 | HPSW | I | Connection detection signal input of the headphone jack "L": no connection, "H": headphone connected |
| 65 | DF-RST | O | Reset signal output to the digital audio processor "L": reset |
| 66 | PCON3 | O | Standby LED control signal output |
| 67 | SW2 | I | Chucking detection switch signal input |
| 68 | F-IN | O | Motor drive signal output |
| 69 | R-IN | O | Motor drive signal output |
| 70 | DVD_SEL | O | DVD select signal output |
| 71, 72 | NC | — | Not used |
| 73 | RGB_SEL | O | RGB select signal output |
| 74 | AVDD | — | Power supply terminal (+5V) (analog system) |
| 75 | AVSS | — | Ground terminal (analog system) |
| 76 | AVREF | — | Reference voltage (+5V) input terminal (analog system) |
| 77 | NC | — | Not used (fixed at "L") |
| 78 | SW1 | I | Loading out detection switch signal input |
| 79 | SW3 | I | Trigger detection switch signal input |
| 80 | AREA1 | I | Destination setting terminal |
| 81 | SEN2 | I | Disc loading detection signal input |
| 82 to 84 | KEY0 to KEY2 | I | Key input terminal (A/D input) |
| 85, 86 | NC | — | Not used (fixed at "L") |
| 87 | MODEL | I | Model setting terminal |
| 88 | RDS-DATA | I | RDS serial data input from the RDS decoder |
| 89 | DVD-POWER | O | DVD power on/off control signal output "H": power on |
| 90 | STOP | I | System power stop signal input |
| 91 | POWER-SW | I | AC power detection signal input |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 92 | SIRCS | I | Remote control signal input |
| 93 | WAKE | I | System wake up signal input by pressing a key on the front panel or remote commander or disc insert detect switch |
| 94 | RDS-CLK | I | RDS serial data transfer clock signal input from the RDS decoder |
| 95 | AV-SEL0 | O | Audio/video selection signal output |
| 96 | AV-SEL1 | O | Audio/video selection signal output |
| 97 | DF-SW | O | selection signal output to the digital audio processor |
| 98 | DF-SYNC | O | Sync signal output to the digital audio processor |
| 99, 100 | NC | — | Not used (fixed at “L”) |

*MEMO*

# HCD-FR1/FR8/FR9

SONY

US Model
HCD-FR1/FR8/FR9
Canadian Model
HCD-FR1

# SERVICE MANUAL

Ver. 1.7 2005.07

## SUPPLEMENT-3

**Subject: Attention at the time of a TACTILE SWITCH replacement**

9-879-011-83

# SERVICING NOTE

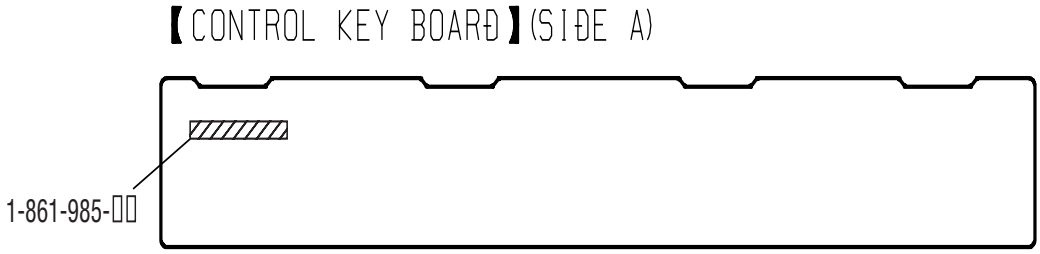
The part numbers of the TACTILE SWITCH on the CONTROL KEY board, DISC KEY board and PW KEY board are depended on a suffix of each board. Please select a TACTILE SWITCH after it refers at the time of a TACTILE SWITCH replacement.
This section describe the response table of a suffix on each board and TACTILE SWITCH.
So,it describe the method for differentiating a suffix of each board.

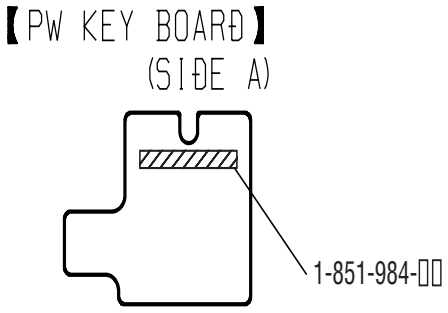
**• RESPONSE TABLE**

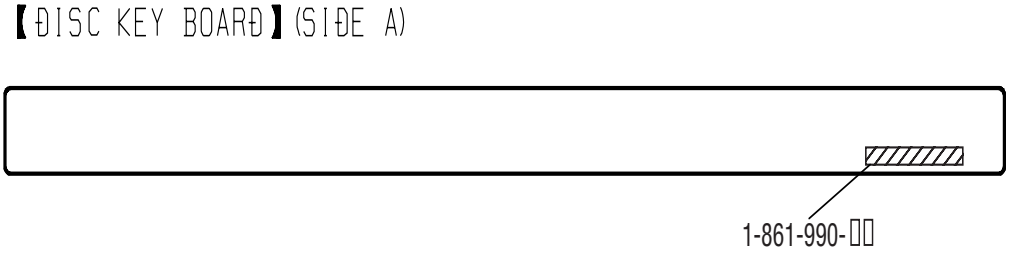
| a suffix of a board (on CONTROL KEY board, DISC KEY board, PW KEY board) | Part No. for TACTILE SWITCH |
|---|---|
| -11,-12 | 1-771-884-31 |
| -13,-14 | 1-786-763-11 |

**CONTROL KEY board, DISC KEY board and PW KEY board changed**
Part number of printed wiring board changed to suffix-12,-13,-14 from suffix-11 in order.

**• How to distinguish**
Location of part number on changed printed wiring board.



*MEMO*

# REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

| Ver. | Date | Description of Revision |
|---|---|---|
| 1.0 | 2004.06 | New |
| 1.1 | 2004.07 | Addition of TEST MODE and ELECTRICAL ADJUSTMENT with SUPPLEMENT-1 (9-879-011-81) |
| 1.2 | 2004.08 | Voltages and Signal path are added into SCHEMATIC DIAGRAM. Addition of DISASSEMBLY, ASSEMBLY, Block Diagram, IC Block Diagrams and IC Pin Function Description with SUPPLEMENT-2 (9-879-011-82) |
| 1.3 | 2004.09 | Addition of Ref. No. 114 (SWITCHING REGULATOR) (SPM-04100) |
| 1.4 | 2004.11 | Change into RF board suffix 12 from suffix 11 (SPM-04111) |
| 1.5 | 2004.12 | Addition of IC902, IC906 and circumference electrical parts on DMB08 board (SPM-04128) |
| 1.6 | 2005.01 | Change to 14 from 13 of a suffix of DMB08 board (SPM-05002) |
| 1.7 | 2005.07 | SUPPLEMENT-3:Attention at a time of a TACTILE SWITCH replacement (SPM-05047) |
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# SS-CT33/TS20/ TS21/WS12

# SERVICE MANUAL

**Ver. 1.2 2005.10**

SS-TS21 SS-WS12 SS-TS20 SS-CT33

*US Model*
*SS-CT33/TS20/TS21/WS12*
*Canadian Model*
*SS-TS20/WS12*
*AEP Model*
*UK Model*
*E Model*
*Australian Model*
*SS-CT33/TS20/TS21/WS12*

## SPECIFICATIONS

**Front (SS-TS21)**

| | |
|---|---|
| Speaker system | Two-way Bass reflex |
| Speaker units | 70 mm dia. cone type,<br>25 mm dia. balance-dome-type tweeter |
| Rated Impedance | 4 ohms |
| Dimensions (Approx.) | 250 x 1115 x 250 mm (w/h/d) |
| Mass (Approx.) | 4.5 kg |

**Center (SS-CT33)**

| | |
|---|---|
| Speaker system | Two-way Bass reflex |
| Speaker units | 70 mm dia. cone type,<br>25 mm dia. balance-dome-type tweeter |
| Rated Impedance | 4 ohms |
| Dimensions (Approx.) | 360 x 95 x 80 mm (w/h/d) |
| Mass (Approx.) | 1.0 kg |

**Surround (SS-TS20)**

| | |
|---|---|
| Speaker system | Bass reflex |
| Speaker units | 70 mm dia. cone type |
| Rated Impedance | 4 ohms |
| Dimensions (Approx.) | 90 x 225 x 75 mm (w/h/d) |
| Mass (Approx.) | 0.7 kg |

**Subwoofer (SS-WS12)**

| | |
|---|---|
| Speaker system | Bass reflex |
| Speaker units | 160 mm dia. cone type x 2 |
| Rated Impedance | 4 ohms |
| Dimensions (Approx.) | 205 x 370 x 450 mm (w/h/d) |
| Mass (Approx.) | 9.5 kg |

Design and specifications are subject to change without notice.

# SPEAKER SYSTEM

**9-879-039-03**
2005J16-1
© 2005.10

**Sony Corporation**
**Audio Group**
**Published by Sony Engineering Corporation**

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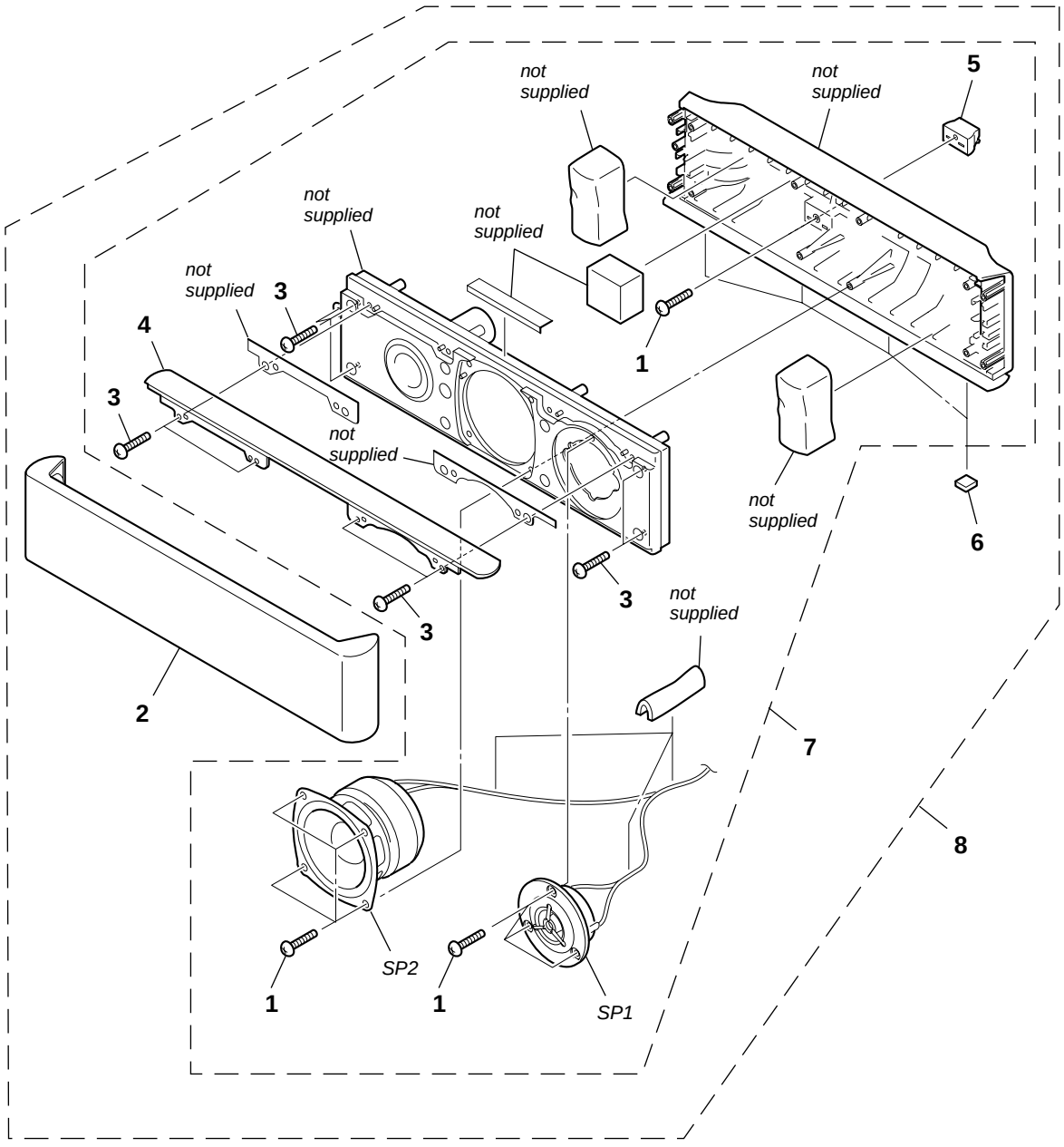
# EXPLODED VIEWS

**NOTE:**

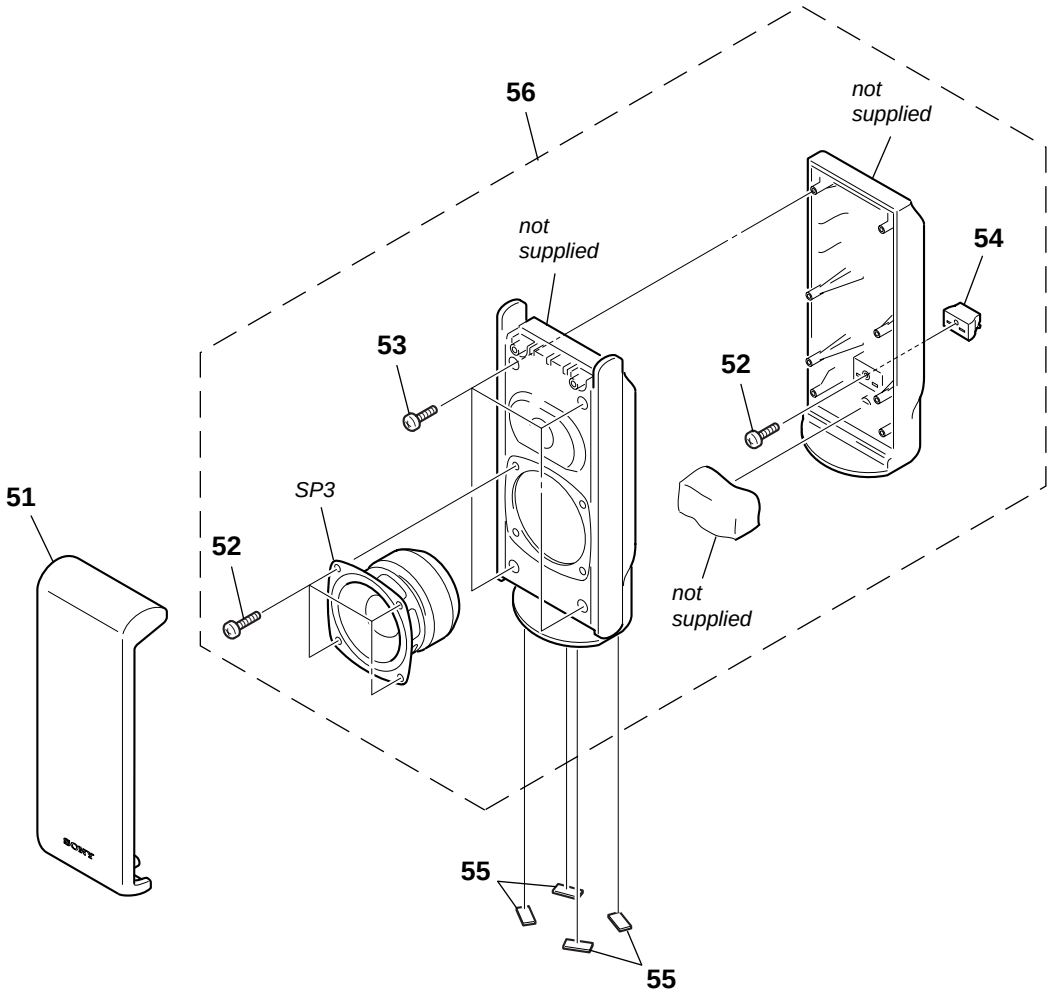
- The mechanical parts with no reference number in the exploded views are not supplied.
- XX and -X mean standardized parts, so they may have some difference from the original one.

## SS-CT33



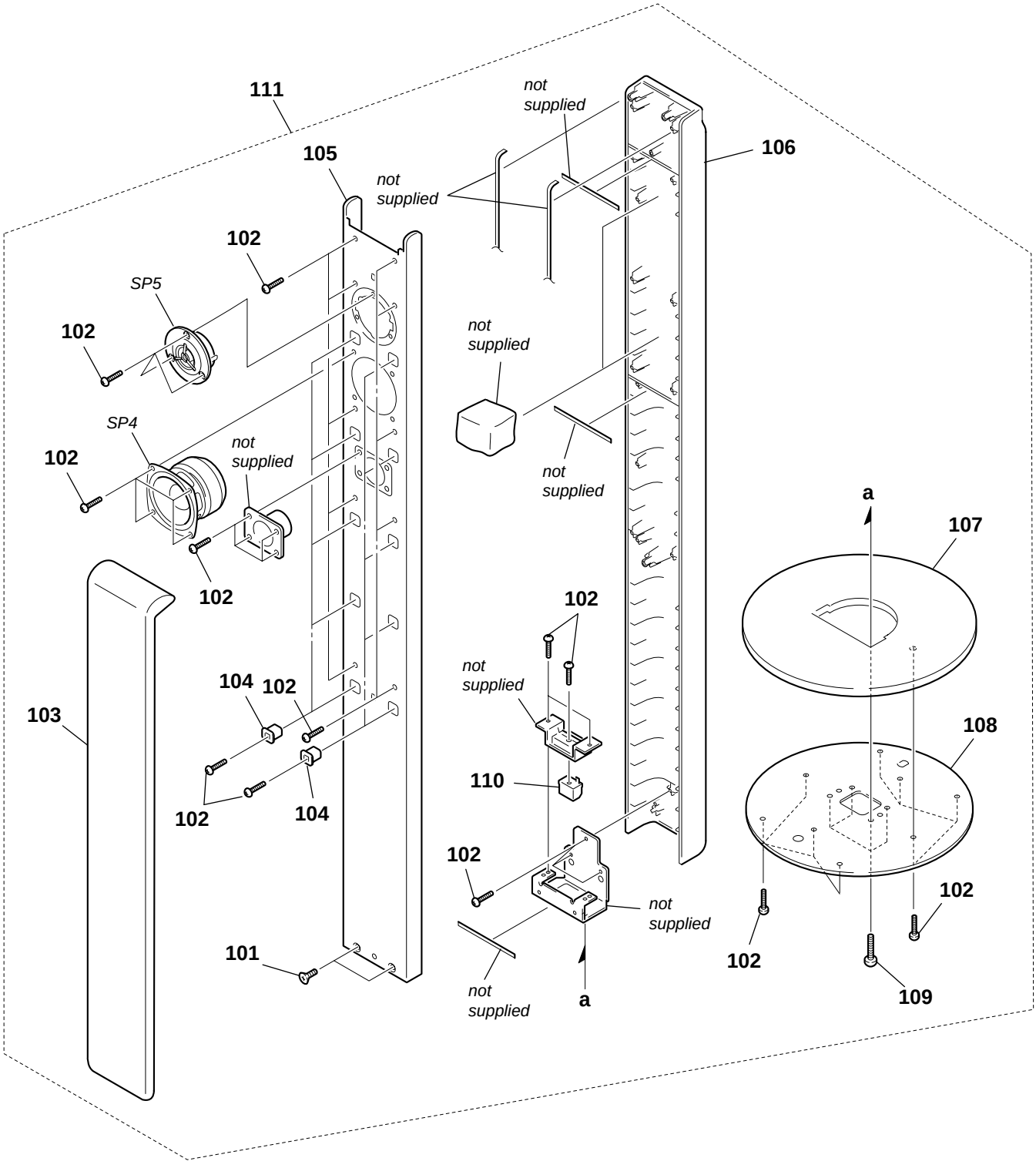

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | 2-048-751-01 | SCREW +BVTP 3.5X14 TYPE2 | |
| 2 | 4-255-212-01 | FRAME, GRILLE | |
| 3 | 4-874-614-82 | SCREW | |
| 4 | 4-255-211-01 | PLATE, ORNAMENTAL | |
| 5 | 1-694-836-11 | TERMINAL, SPEAKER | |
| 6 | 4-255-886-01 | FOOT | |
| 7 | A-4715-726-A | CABINET ASSY | |
| 8 | A-4715-725-A | OVERALL ASSY | |
| SP1 | X-2022-128-1 | SPEAKER ASSY (2.5cm) | |
| SP2 | 1-825-871-11 | SPEAKER (7cm) | |

**SS-TS20**




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | X-4956-466-1 | FRAME ASSY, GRILLE | |
| 52 | 2-048-751-01 | SCREW +BVTP 3.5X14 TYPE2 | |
| 53 | 4-874-614-82 | SCREW | |
| 54 | 1-694-836-11 | TERMINAL, SPEAKER | |
| 55 | 4-255-545-01 | FOOT | |
| 56 | A-4715-728-A | CABINET ASSY | |
| SP3 | 1-825-871-11 | SPEAKER (7cm) | |

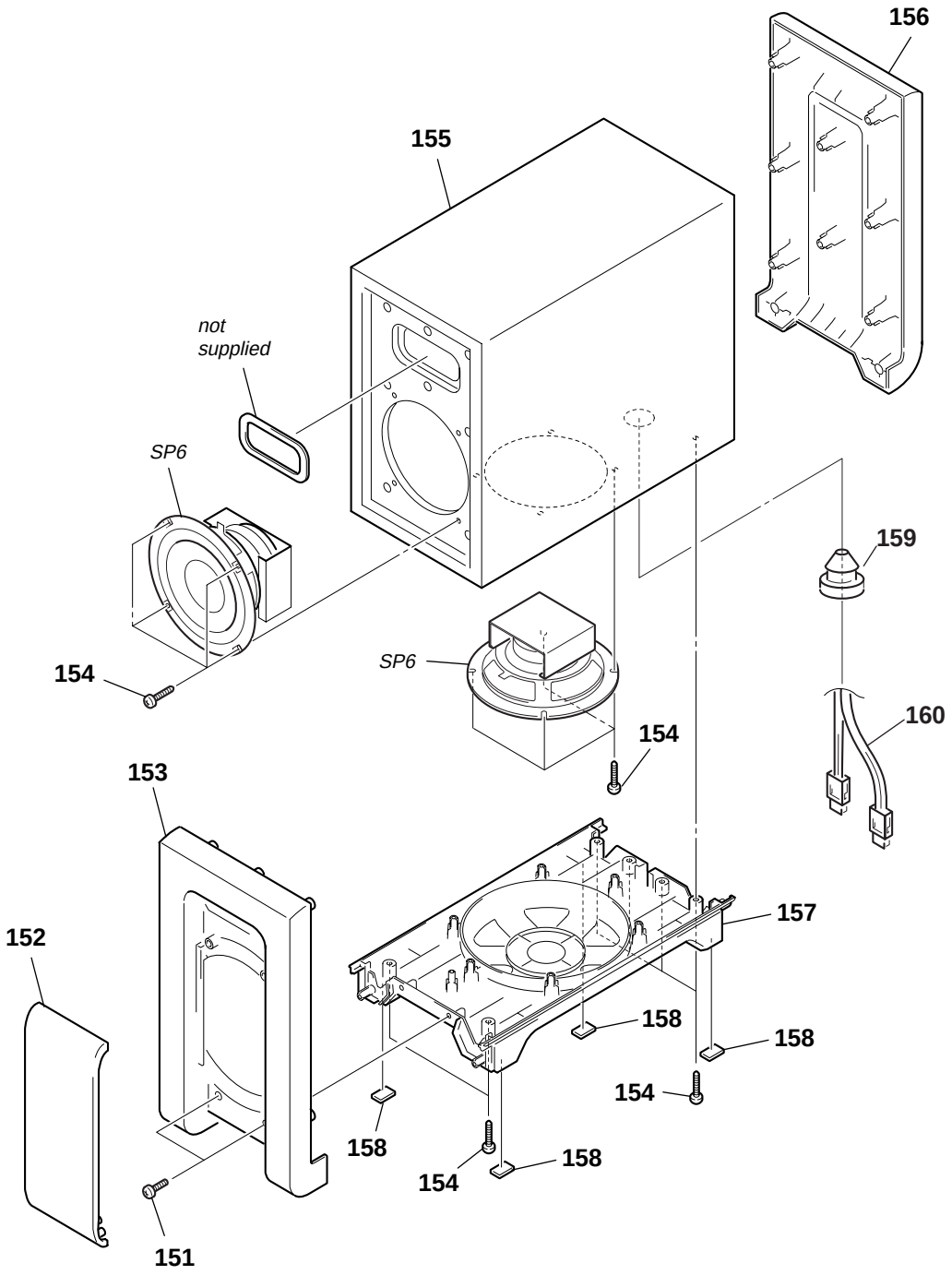
## SS-TS21




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 101 | 7-685-260-14 | SCREW +KTP 4X10 TYPE2 NON-SLIT | |
| 102 | 2-048-751-01 | SCREW +BVTP 3.5X14 TYPE2 | |
| 103 | 4-255-201-01 | FRAME, GRILLE | |
| 104 | 4-255-204-11 | CATCHER, MOLD | |
| 105 | 4-255-203-01 | PANEL, FRONT | |
| 106 | 4-255-202-01 | CABINET | |
| 107 | 4-255-208-01 | COVER, BASE | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 108 | X-2022-096-1 | BASE SUB ASSY | |
| 109 | 2-067-934-01 | SCREW +BV M4X16 | |
| 110 | 1-694-836-11 | TERMINAL, SPEAKER (2.5cm) | |
| 111 | A-4715-722-A | OVERALL ASSY | |
| SP4 | 1-825-871-11 | SPEAKER (7cm) | |
| SP5 | X-2021-617-1 | SPEAKER ASSY | |

**SS-WS12**




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 151 | 2-048-751-01 | SCREW (1)(3.5X14), TYPE2 | |
| 152 | 4-255-189-01 | FRAME, GRILLE | |
| 153 | 4-255-190-01 | PANEL, FRONT | |
| 154 | 4-874-614-52 | SCREW (1)(3.5X20), TAPPING | |
| 155 | X-4956-465-2 | CABINET ASSY | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 156 | 4-255-191-01 | PANEL, REAR | |
| 157 | 4-255-192-01 | PANEL, BOTTOM | |
| 158 | 4-255-582-01 | FOOT | |
| 159 | 4-255-357-01 | CLIPPER,CORD | |
| 160 | 9-831-275-06 | WIRE KIT | |
| SP6 | 1-825-870-11 | SPEAKER (16cm) | |

# REVISION HISTORY

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| Ver. | Date | Description of Revision |
|---|---|---|
| 1.0 | 2004.06 | New |
| 1.1 | 2005.02 | Addition of Ref. No. 111 (SS-TS21)<br>Change of Parts No. for Ref. No. 104, 151, 155 (SPM-05008) |
| 1.2 | 2005.10 | Addition of Parts No. for Ref. No.159 and 160 (SPM-05069) |
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